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MARCH 21, 1966

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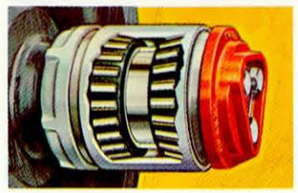

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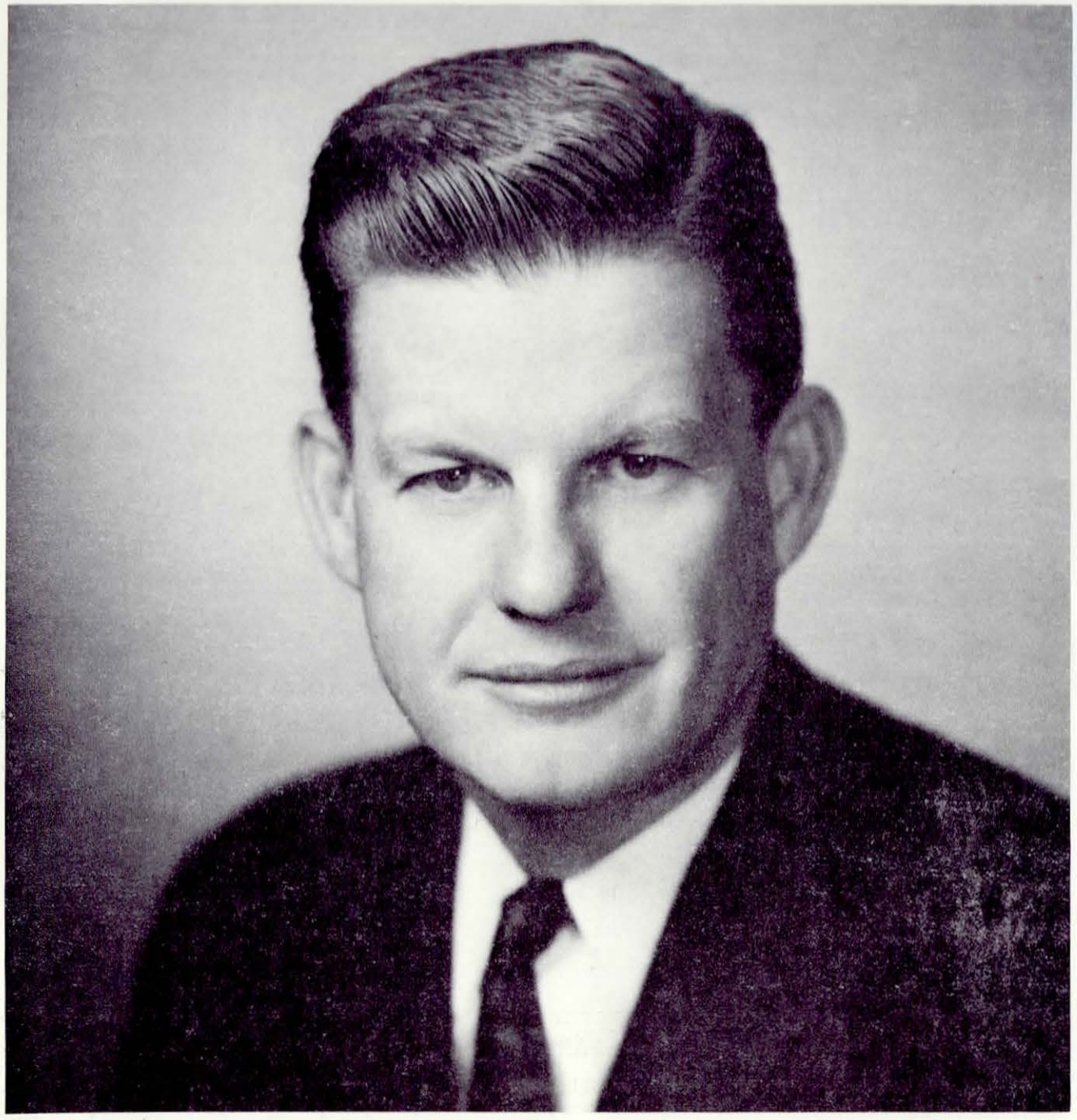

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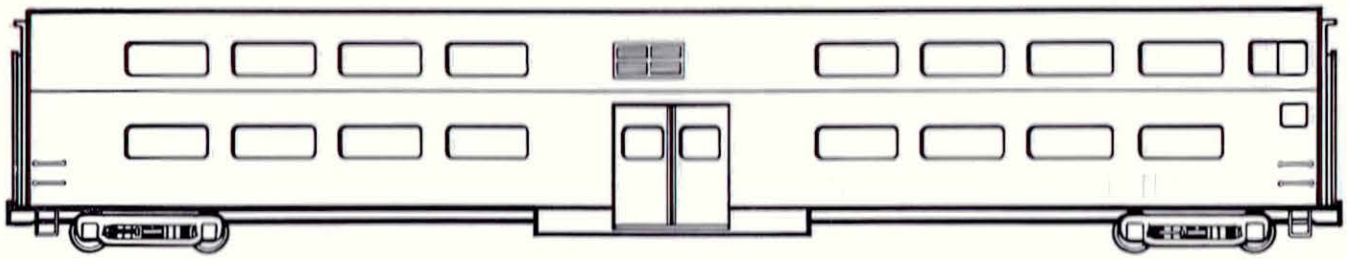

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SHORT AND SIGNIFICANT

Passengers in autos: NYC may haul them

The Commerce Department and the New York Central are working on a plan that could take a lot of cars—and their passengers—off the highways. The idea is for the railroad, with the government sharing the cost, to build a test flat car that could carry automobiles and their passengers in the consist of a regular passenger train. The Commerce Department is interested in learning if it's feasible for passengers to ride in their autos on trains at high speed for long distances. The test rail car will be designed with special springs to reduce car motion. Trial runs on the NYC will last a month.

●

C&O-B&O trains lose more mail traffic

Mail revenues constitute almost 40% of C&O-B&O passenger revenues, and recent action by the Post Office Department is jeopardizing the continued operation of many of these trains, the railroad says. Last year the railroads lost $11.1 million operating passenger trains, up from $10 million in 1964. Now, the Post Office has cancelled service on two trains serving Ashland, Ky., Columbus, Toledo and Detroit. Last August, the Post Office Department diverted sizable amounts of mail to trucks from C&O trains in Virginia and West Virginia, which will mean an annual loss of $700,000 to the road. Paul H. Reistrup, C&O-B&O director of passenger services had this comment on the Post Office's latest action: "I've asked it before and I'll ask it now. What's going to happen next Christmas or any time that the Post Office needs us, and there are no trains in operation to move the mail swiftly and reliably?"

●

NITL special session will study LBJ program

What position will the nation's shippers take on President Johnson's transportation program? The answer may come out a special membership meeting that has been called by the National Industrial Traffic League for April 19 in Chicago. The meeting was called "in view of the tremendous importance of President Johnson's Transportation Message and implementing legislation." Among other things, the League will review its policy on a Department of Transportation. In the past, NITL has opposed the creation of such a department in the executive branch.

●

Railroads get hit hard with excess taxes

Discriminatory assessments of railroad property in some 20 states are costing railroads operating in these areas sizable overpayments in taxes each year. In 1964 alone, the roads paid $75 million in excess taxes, doubling their property tax bill. These are some of the tax inequities cited by GM&O vice president and general counsel James N. Ogden in testimony before the House Interstate and Foreign Commerce Committee. Ogden, in urging passage of HR. 4972, which would prohibit discriminatory assessments as an undue burden on interstate commerce, said that in the past six years while similar legislation has been pending the railroads have been overtaxed more than three quarters of a billion dollars.

●

Decline continues in railroad employment

Employment on Class I railroads (as of mid-February 1966) totaled 621,136—a drop of 1.41% below the year-ago level, and 0.4% below January. By category, totals were: executives, officials and staff assistants, 15,038; professional, clerical and general, 133,978; maintenance of way and structures, 88,491; maintenance of equipment and stores, 145,447; transportation (other than train, engine and yard), 61,086; transportation (yardmaster, switchtenders, hostlers, 9,854; and transportation (train and engine service), 167,242.

MONDAY MORNING REPORT

LBJ's proposal gets the once-over

Congressional hearings on President Johnson's proposal to create a Department of Transportation are only a week away (see page 37). Within the next few days, the AAR and its counterpart organizations representing other modes of transport will hold meetings in Washington to determine the industry's position on the proposal. To get a preliminary sampling of opinion, the Transportation Association of America last week called together in Washington a panel of top-flight officials from each segment of the transportation world. All emphasized that they spoke only for themselves, not their respective industries. Some liked the proposal; others said, in effect: We've got to know more about how the Department would work before making up our minds.

Some top transport officials like it . . .

Panel members in favor of the idea included Rock Island Chairman and President Jervis Langdon, Jr.; Morris Forgash, president of U. S. Freight; Maj. Gen. E. C. R. Lasher, president and chief executive officer, North American Car; and Richard D. Hill, executive vice president, First National Bank of Boston. Said Langdon: "The proposal to create a Department of Transportation is a sound one. Legislation to implement this should be enacted and enacted promptly. For once, the right hand in our government is going to know what the left hand is doing. It's simply good government to bring all these transportation activities together." Forgash agreed: "What we have now is 20 transportation agencies, instead of one; we need this Department, we've got to have it." Lasher saw the new Department providing cross-modal comparisons of economic efficiency.

. . . but others are not so sure

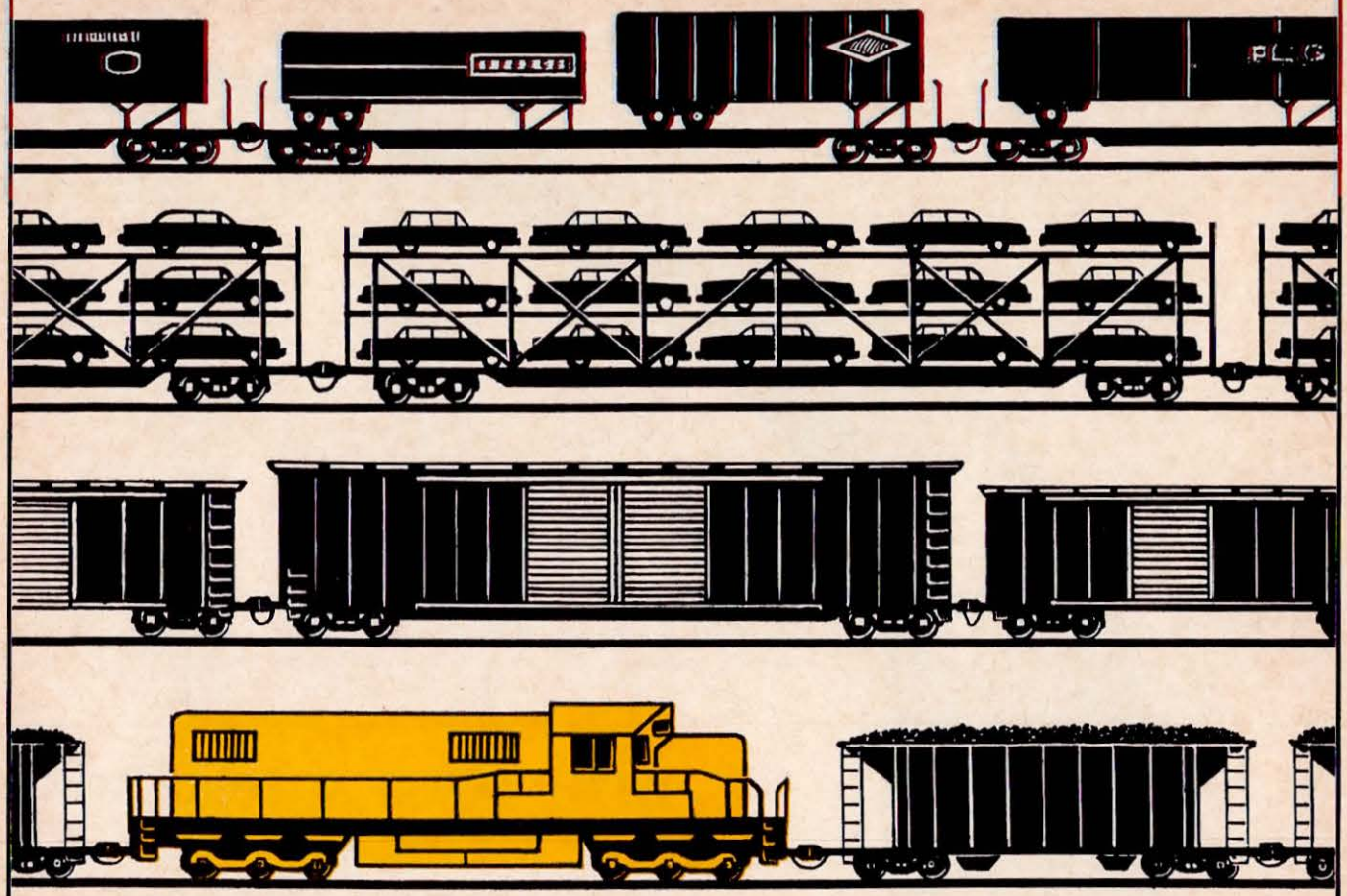
Some other panel members had mixed feelings. W. K. Smith, director of traffic, General Mills, liked the idea in principle, but wanted safeguards against political pressures. W. J. Barta, president, Mississippi Valley Barge Line, thought the proposal ignored "broad, burning issues"—user charges, rate de-regulation. W. M. Frantz, president, Eastern Express, thought it raised "most serious questions," such as investment criteria in allocating federal funds. Stuart Tipton, president of the Air Transport Association, said from the audience that he didn't like all aspects of the proposal, but it might be better to have a Secretary of Transportation setting policy out in the open, instead of its being set behind the scenes.

Boyd spells out Commerce's viewpoint . . .

The Administration's position was spelled out by Alan S. Boyd, under secretary of commerce for transportation. The proposed new Department, he said, "is not going to be engaged as a traffic manager for the U. S. government." Establishment of the Department would provide for coordinated development of transportation policy—something beyond the limited capabilities of regulatory agencies such as the ICC. Just as before, he noted, "Congress sets policy, the President signs it into law, and the courts interpret it. But somebody's got to develop it."

. . . and dismisses talk of political pressures

There are safeguards against political pressures, Boyd thought: It's highly unlikely the President would appoint a Cabinet-level officer "who is captive of any particuar industry," or the AFL-CIO, either. The new Department, Boyd said, would provide a centralized approach to gathering statistics and all research efforts. "This is not another step on the road to socialism," he insisted. "Or if it is, everybody in this room who has a business is a socialist, and should stand up and be identified."



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WEEK AT A GLANCE

Is time running out for running boards?

Elimination of the roof running boards from box and many other "house-type" freight cars now required to have them has been recommended by ICC Examiner R. R. Boyd in a revision of the U.S. Safety Appliance Standards to become effective April 1 if there are no postponements. Exempted from the running board requirement would be all box, stock and refrigerator cars which do not have roof hatches. The ICC had previously exempted from the running board requirement so-called Hy-Cube box cars with roofs 16 feet, 10 inches or more above the rails. All new house cars would be built without running boards and without full-height side and end ladders; the hand brake would be located so it could be operated from a platform across the car's end sill. Existing cars would have to have their running boards removed by April 1, 1974; car owners could either remove all full-height side and end ladders and relocate the hand brake, or could leave the hand brake in its present location near the roof and leave only one set of side and end ladders.

Canadian Pacific's president dies

R. A. Emerson, president and chief operating officer of the largest privately owned transportation company in the world—Canadian Pacific—died in his home in Montreal, Que., March 13. Mr. Emerson, who was 54 years old, is believed to have suffered a heart attack. He began his long career with the CP in 1928, working in the summer as a rodman while attending the University of Manitoba. After serving the railroad in many parts of Western Canada he was assigned to Montreal in 1948 as engineer of tracks. Moving up the corporate ladder, he was elected president of the company in October 1964, succeeding N. R. Crump, who then became chairman and chief executive officer of the giant company. Mr. Emerson had been a director and member of the executive committee of CP since 1958. Chairman Crump described the passing of Mr. Emerson as "a tragic loss. His outstanding contributions to Canadian Pacific and to Canada will be long remembered by all of us who have worked with him. . . On behalf of all of us in Canadian Pacific I wish to express our deepest sympathy to his family in their bereavement."

Funeral services were held March 17.

ICC cites "progress" in merger cases

In an apparent effort to ease Wall Street's fears that snags may have developed in railroad merger plans now before the Interstate Commerce Commission, the ICC issued a statement last week saying that "every effort is being made to expedite the proceedings." The cases involved are those that (if favorably acted upon) would create the Pennsylvania New York Central Transportation Co. and the Great Northern, Northern Pacific & Burlington. The ICC statement noted that "the size of the records and the magnitude of the issues involved have consumed considerable staff time." In a break with past procedure, the ICC has decided to give three days' advance notice of the decisions. This would apply also to disposition of the New Haven's proposal to abandon all passenger service. "Despite the many procedural problems encountered," said the ICC, "uninterrupted progress is being made in disposing of all three cases." Best guess now is that the Penn - Central decision will come in April, and will be followed swiftly by a decision on the GNP&B proposal.

ICC takes action in car shortage

The ICC late last week issued one exclusion order and four general car service orders to ease a box car shortage that has reached "emergency" proportions. Great Northern has been hardest hit, with just 52.4% of its box cars on line; Northern Pacific is a close second, with a 60.6% ratio of on-line box cars. The orders expedite movement of empties back to the GN and NP, in particular, and increases demurrage rates generally. ICC Chairman John W. Bush acknowledged that the move was drastic, but pointed out that the nationwide shortage is now averaging almost 13,000 box cars a day.

'66 capital outlays now put at $1.8 billion

Barring the unforeseen, railroads appear certain to set a new record in capital outlays in 1966. That's the finding of a joint survey just released by the Department of Commerce and the Securities and Exchange Commission. The survey's educated guess is that the industry will make capital investments totaling $1.83 billion this year—a $100-million improvement over the record $1.73 billion which the survey cites as actual railroad spending in 1965. (The ICC's figure on '65 spending, based on reports submitted by the carriers, is $1.63 billion.)

GUS WELTY'S LINES ON LABOR

WELTY

MAKING AN AGREEMENT is one thing. Interpreting it can be something else again—as both railroads and the operating brotherhoods have discovered anew in trying to agree on what is "suitable lodging."

In the so-called White House agreement of 1964, railroads were required to furnish to engine- and train-service employees "suitable lodging," without charge, at far terminals. Companies and their employees were supposed to reach "mutual understandings" in light of local conditions.

AND WHAT HAPPENED? Since '64, "suitable lodging" has been one of the hottest issues debated by railroad labor-relations people and the ops. There have been many settlements. But there have also been strikes and threats of strikes. The National Mediation Board has been kept busy. Even the courts have been called upon to take a hand.

THE OPERATING UNIONS, it seemed, were willing to accept a definition of suitable lodging as "what any reasonable man would consider appropriate." But there's a certain stretch to the words "reasonable" and "appropriate," and as some labor-relations officers saw it, union demands were stretching the definitions all out of shape. Disputes developed. So, eventually, some railroads had to concede more than they wanted to, some union committees had to back off on certain extreme demands. And the issue is now tapering off, at least for the time being (the Brotherhood of Railroad Trainmen, for example, had a lodging case pending only on one segment of one major road as March began).

AND, WHILE THERE'S NOTHING FUNNY about labor relations, the whole lodging dispute did have its off-beat aspects—like the unions' respect for the snore-power of weary crewmen. It all had to do with the fairly general demand for single-occupancy lodging—a demand which most union committees seemed to regard as paramount.

ONE TOP UNION NEGOTIATOR put the argument this way: "Have you ever come in off the road, and you're dead-tired? And they put you in a room with another fellow who's just as tired as you are? Well, boy, you'd better get to sleep first—because if you don't, the snoring starts. And you've had it. No sleep tonight."

HOW DO THE OPS regard the lodging settlements that have been made? By and large, they seem satisfied. They didn't get single-occupancy in all cases, and they certainly didn't get all they demanded in other areas. But they seem satisfied —and there's some evidence that top union officers are awfully glad their people did go for actual lodging, instead of for money on an in-lieu-of basis. Reason: In some instances, money for lodging had been obtained before, but the men promptly forgot what the money was for and demanded lodging again. And even union officers like a few moments, peace—without the embarrassing complications that such "forgetfulness" can produce.

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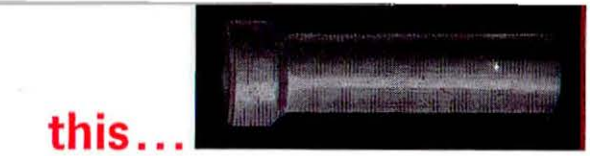

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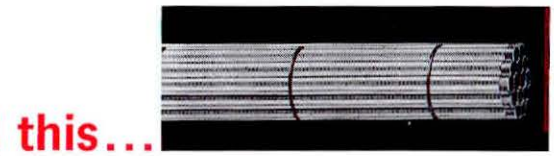

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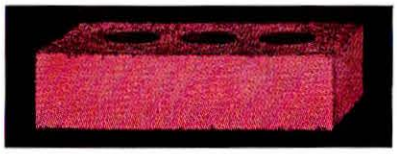

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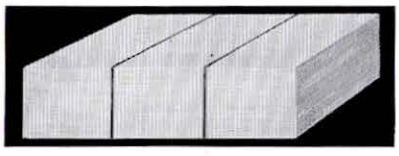

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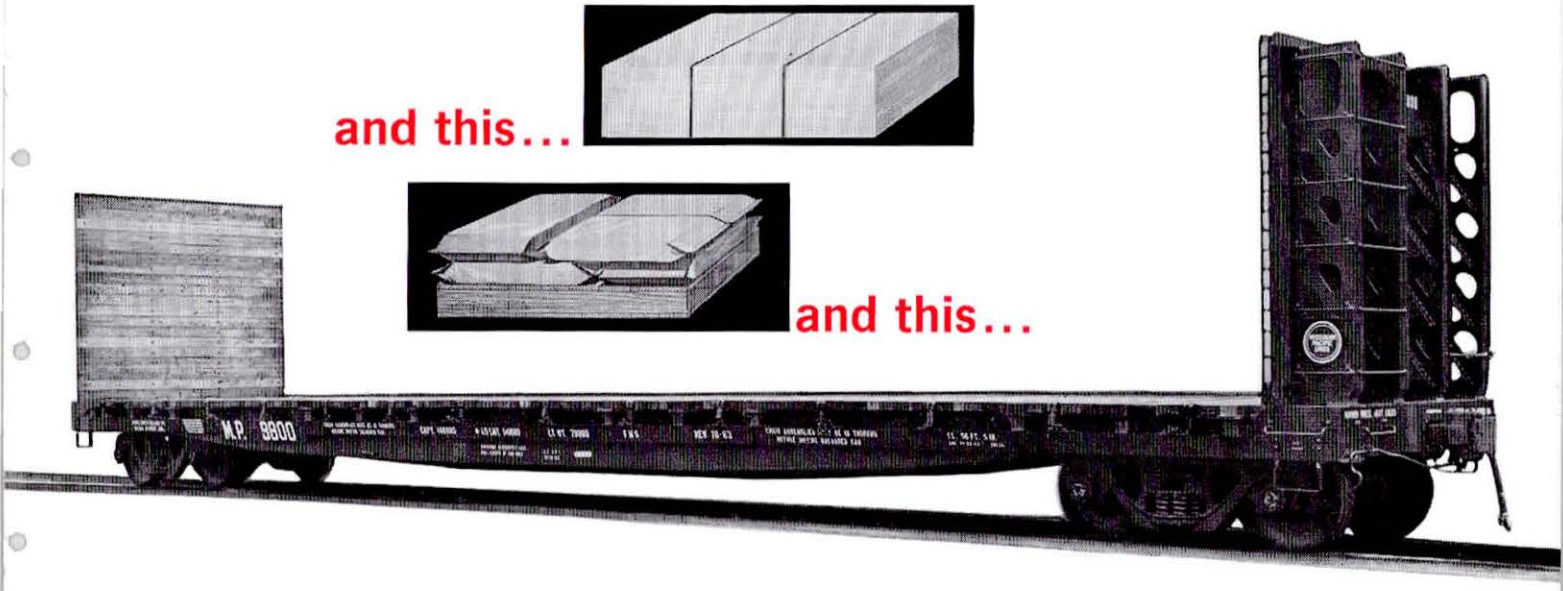

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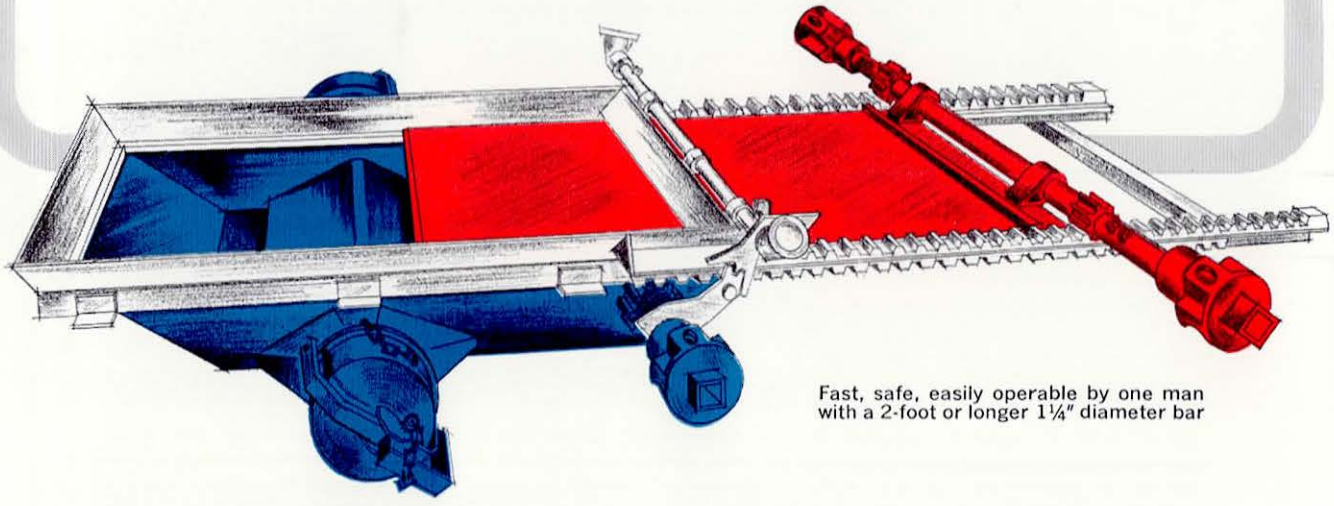

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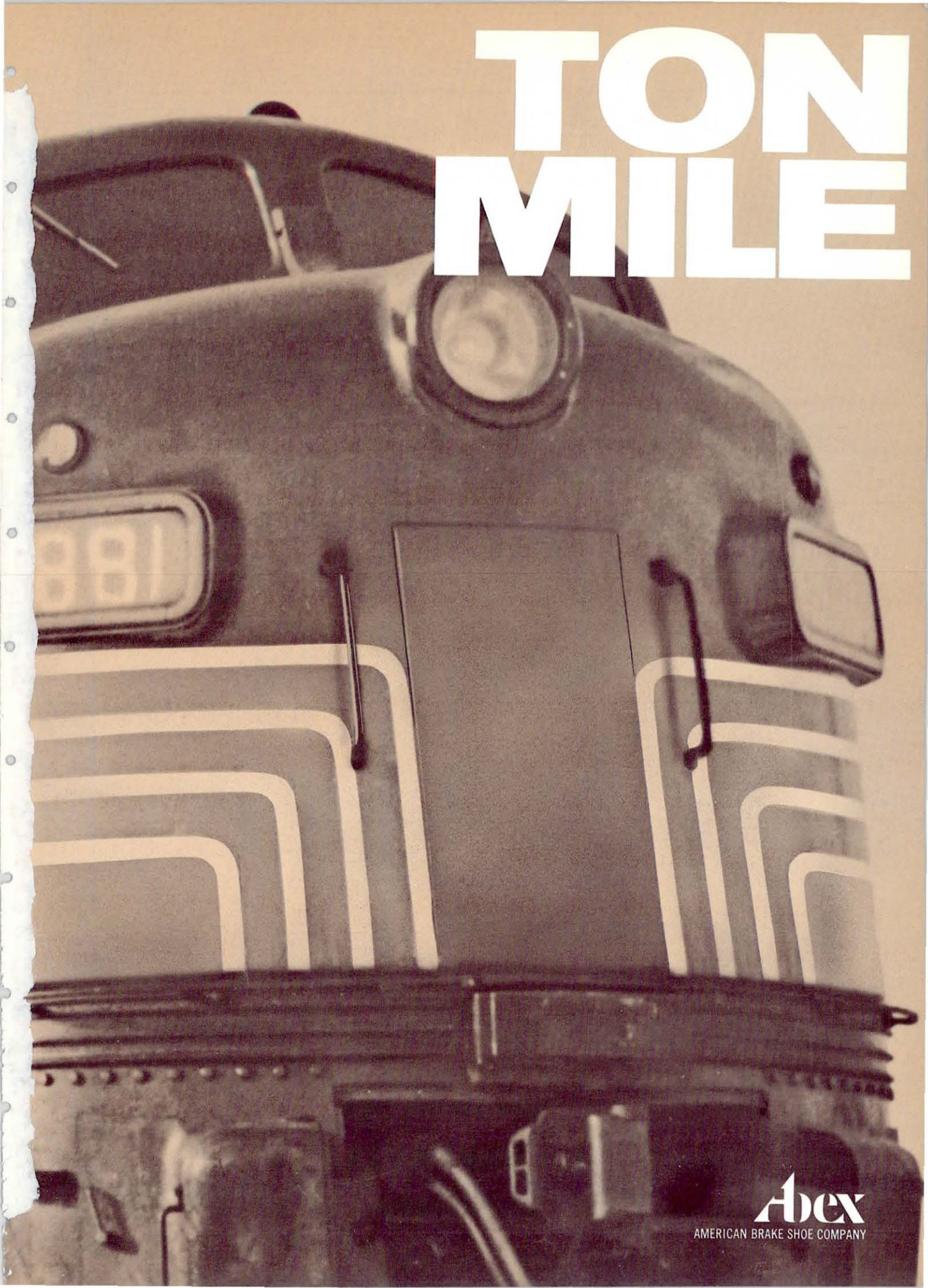

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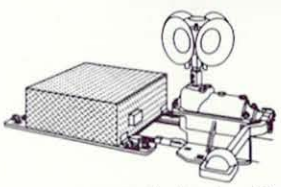

Today's small flat yards can be as efficient as large, computer-controlled yards. Here's the reason: the Racor Economatic® Yard. This Abex development is quick and economical to install. It features a low (5-10') hump; our speed-sensing automatic retarders; our automatic hydraulic switch machine with #22 stand; and a unified control station, from which a single operator controls classification of three to four cars per minute.

The Pennsylvania Railroad converted their 59th Street, Chicago, yard to Economatic. What happened? Combining eastbound and westbound yards in one, it eliminates crossover cars, duplicate deliveries and duplicate tracks. 1500 cars or more can be handled per day. Delivery times are as much as 24 hours faster.

For yards handling under 2000 cars a day, the word is Economatic —one of the latest developments for modern railroading from Abex. Railroad Products Division, American Brake Shoe Company, 530 Fifth Avenue, New York 10036.

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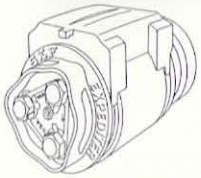
Today, they're pulling longer freights than ever, and this is the kind of help we're giving them.



There's extra ton-mile efficiency in the SKF® Expediter® "G" cylindrical roller bearing. It outperforms tapered roller bearings in many ways: has larger radial load capacity and absorbs thrust without wedging... has higher speed capacity and runs cooler...has a predictably longer service life. Rollers, with sphered ends and angular contact flanges, prevent smearing of the thrust surfaces. Shrouded seal keeps grease in, dirt out.

From the service standpoint, the Expediter "G" is superior, too. You can remove the outer ring and roller assembly without pressing the bearing off the axle for a spot check in the field. In the shop, you can inspect it more thoroughly and in less time than tapered roller bearings.

The Expediter "G" and the Versalloy III adapter are the newest in our full line of bearing products: another way Abex contributes to progressive railroading. Railroad Products Division, American Brake Shoe Company, 530 Fifth Avenue, New York 10036.

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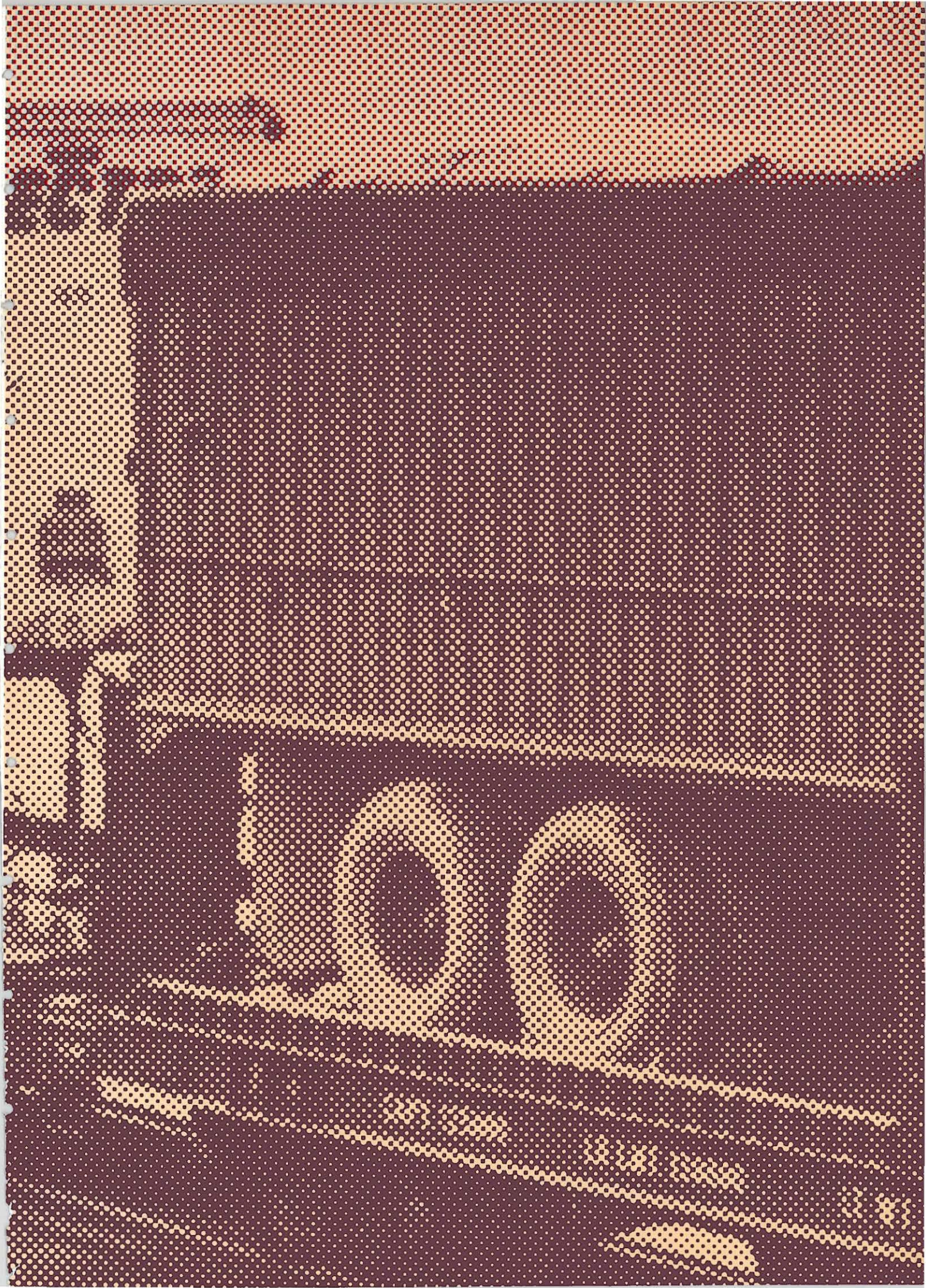
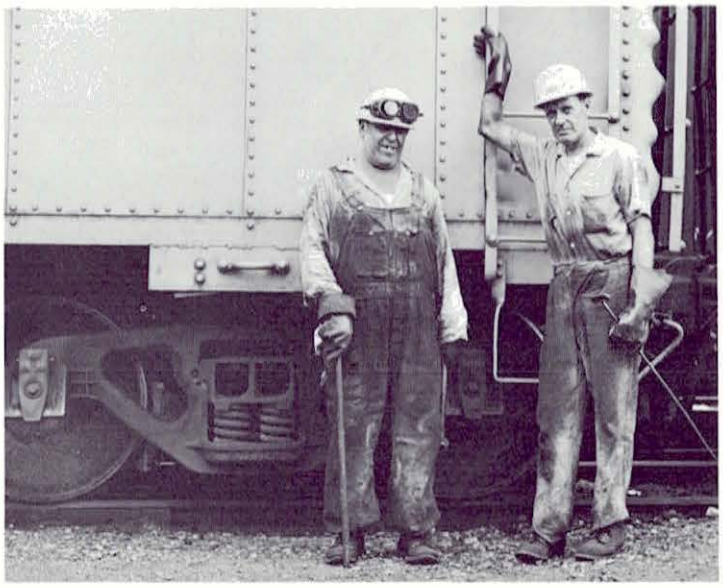
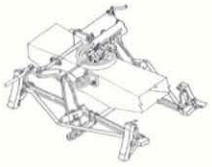


Tomorrow, somebody will service a brake in half the time, and this is how we will help him do it.





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The Absco Brake is cushioned from shock on the sprung bolster. And it's the only truck-mounted brake with automatic slack adjustment.

The Absco Brake: Another of the many ways Abex is contributing to increased efficiency in modern railroading. Railroad Products Division, American Brake Shoe Company, 530 Fifth Avenue, New York 10036.

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- With Abex railroad brake materials, trackwork, journal bearings, lubricating pads, dust guards, cast steel wheels.
- With extensive research and engineering facilities aimed at developing new products, and improving present ones
- But most of all, with people. Our 57 representatives, in 14 offices around the country, bring you up-to-date news of the new and improved products we develop for you—and also tell us how to serve you better.

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What's ahead for railroad engineers?

Speakers at AREA convention discuss the challenges that face all engineering officers in 'Year 5 of the new age of railroading'

The emphasis was on "new dimensions" in railroading last week at Chicago during the annual meeting of the American Railway Engineering Association.

It was keynoter Rex Manion, vice president of the AAR's operations and maintenance department, who used the term in the title of his address at the opening session on Monday. As it turned out nearly every succeeding speaker during the two-and-one-half-day meeting was discussing his own particular version of the new dimensions that can be found in the current railroad picture.

There were 11 such speakers. The other addresses were delivered against a background of reports on 110 assignments presented by subcommittees of the association's 22 standing committees. Directing the activities this year as president of the association was A. V. Johnston, Canadian National chief engineer.

• **The challenge of wages.** Noting that 1966 "can properly be called Year 5 of the New Age of Railroading," Manion first chronicled the changes that have occurred "since the industry emerged from the dismally low traffic years, 1958 through 1961." In his opinion the greatest single challenge faced by railroad management is the 17% jump that has taken place since 1961 in the average annual compensation paid employees—to $8,336 in 1965. "This labor cost increase," he said, "made the concurrent reduction of 8% in average rail ton-mile charges all the more spectacular."

Recognizing that labor-cost inflation, coupled with fierce competition in the transportation marketplace, confronts everyone in management with pressures of "almost unbelievable severity," Manion outlined a "tough assignment" for his audience. That assignment is to increase efficiency to absorb increased wages and materials prices and still provide funds for plant and service improvements and allow for traffic-winning rate revisions.

• **'Tidal wave' of changes.** In meeting this challenge railroad engineering officers have set in motion a "tidal wave of technological changes" which, as listed by Manion have included:

—Improvements in tracks and structures required by rising wheel loads and higher speeds.

—Yard improvements made with an eye toward further cutting car-classification costs and speeding the flow of freight shipments.

—Improvements in motive power, with locomotives of as much as 6,000-hp now being installed for heavy-volume loading.

—Revitalizing of the freight-car fleet, with more than a million replacements being made in the postwar period.

—The introduction of cars tailored to meet shippers' specialized requirements, with improved loading devices, springing, brakes, journal bearings and impact-cushioning gear.

—Wider application of data-processing equipment in promptly locating cars and otherwise producing detailed operating information on a "real time" basis.

—The companion development, now in process, of trackside automatic car identification systems for the continuous input of car information.

—The extension of centralized traffic control systems to cover more than 37,000 miles of railroad, or nearly six times that of two decades ago.

NEW AREA OFFICERS

J. M. Trissal (left), vice president of the Illinois Central, was elected president of the American Railway Engineering Association at the group's annual meeting in Chicago last week. T. B. Hutcheson (right), Seaboard Air Line chief engineer, is the new senior vice president.

• **More problems ahead.** But Manion sees more problems ahead partly due to further growth of railroad business. Freight volume today is nearly one-fourth greater than in 1961, he said, and ton-miles so far in 1966 are 7% above last year's record peacetime level. He added: "Such an annual rate of gain in traffic volume will not take long to pile an additional load of vast proportions on railroad facilities. Operating men and engineers, therefore, have a special responsibility, both to the railroads and the nation and the public we serve, to so prepare our physical properties and operating methods as to enable railroads to do this great job smoothly and efficiently."

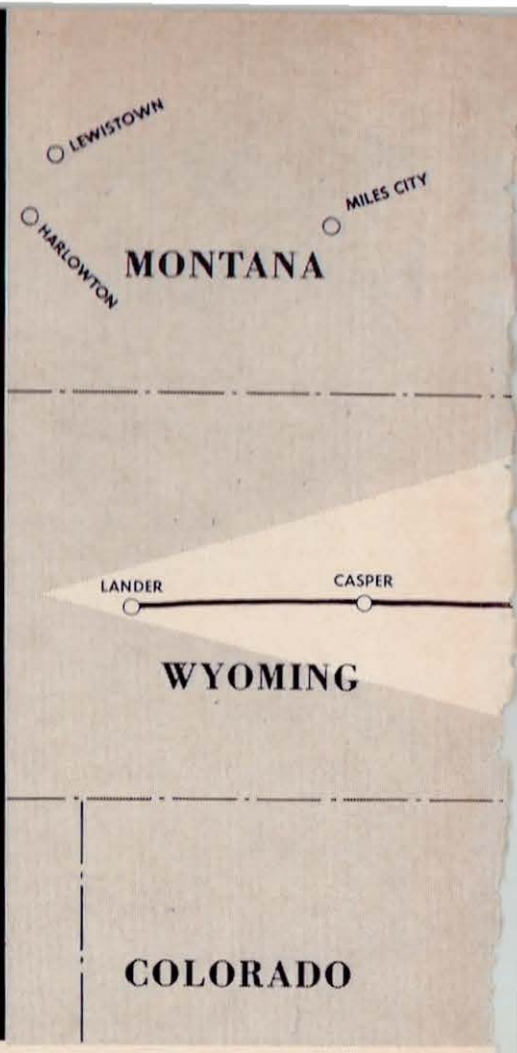
A question raised by Manion is whether our 215,000-mile transportation system can be streamlined and reshaped to cope "with this era of dynamic economic change, fast-paced services and many alternative transport choices."

The problem facing engineers he summed up in these words: "This basic restructuring task of consolidating here, cutting back there, coordinating with other carriers, coming up with new research and marketing approaches—all this calls for wholly different attitudes and unprecedented cooperation from all involved, both within and around the industry. It calls for tremendous infusions of new investment capital. And it calls for an all-out effort to adapt to railroading the vital new technological developments occurring across the nation."

• **Concrete ties gaining.** Judging by remarks made by one of the speakers the prestressed concrete crosstie may be included as one of the new dimensions in railroading. In a comprehensive address on this subject, G. M. Magee, the AAR's director of engineering research, noted that the number of prestressed concrete ties installed in this country had shown a steady increase since the first test installations were made in 1960. From 1,270 in that year, the number of such ties installed annually increased to 265,000 in 1965, he said. Magee added that there are now close to 400,000 such ties in service, of which about 290,000 are in main-line track.

Magee's remarks were concerned primarily with the prestressed tie as developed by the AAR research staff and manufactured by the American Concrete Crosstie Corp. However, other types of concrete ties available in this country were illustrated and described briefly. These included the B-58 tie used by the German Federal Railway which will soon be available in this country from U.S. Crosstie, Inc., Milwaukee,

(Continued on page 42)



C&NW's SPECTACULAR COMEBACK: THE HEINEMAN YEARS

C&NW TAP ROOT: The existing Chicago &

Ben Heineman's decade-long stewardship of the Chicago & North Western has seen the road move from red ink to large splashes of very solid black ink.

Chicago & North Western and Chairman Ben W. Heineman complete a memorable decade together April 1.

And what a decade it has been. Investors no longer cringe when they think of the C&NW shares in their portfolios. In the 10-year period, the road has gone from a very red $5.5-million loss in 1956 to a solid $16-million net in 1965.

Further, the turnaround in results is only part of the good news coming out of the new North Western nowadays. The road's employees, shippers, commuters and shareholders also have rising expectations from such assets as:

—C&NW's plant and carfleet. It has respectability such as it has not had for years.

—Mergers in the making.

—C&NW's commuter service. Record revenues and earnings in 1965 from the road's suburban operations at Chicago promise to get even better. Trends so far in 1966 indicate growing rush-hour and non-rush-hour traffic.

—Diversification. Prospects for increased earnings from C&NW's entry into chemical manufacturing are very bright.

—Ben W. Heineman himself. There are those who insist he is C&NW's single best asset.

Ten years at C&NW have not abated one whit Heineman's conviction that the rail industry future "is unlimited and will eclipse the great railroading years of the 19th Century." Perhaps more pertinent to what happened at C&NW, Heineman has a passion for dispassionate analysis and a taste for action based upon such analysis.

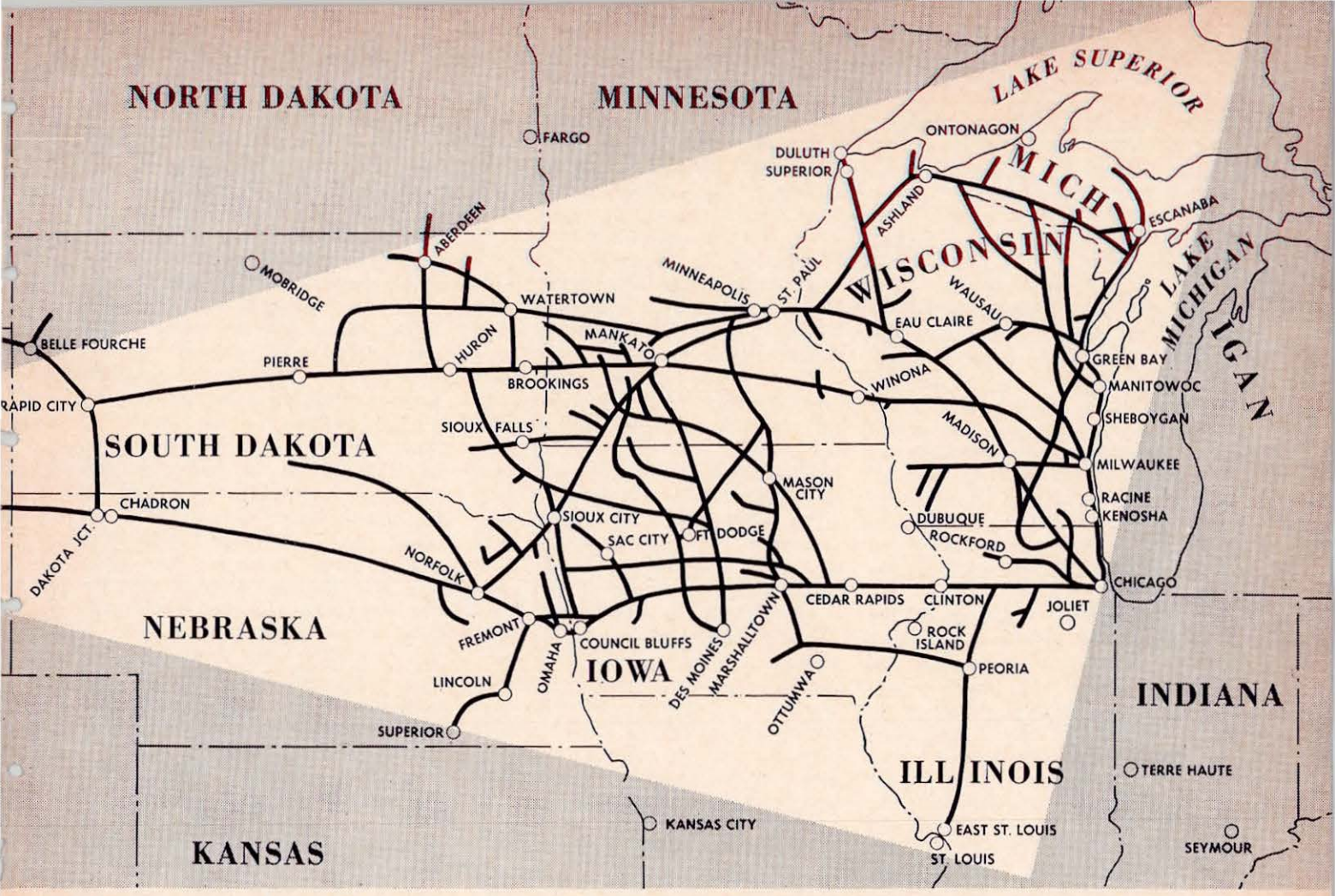
C&NW's drive to hold and reduce rates and to work out economically attractive rate-service-equipment combinations that "make competition" and gain tonnage over the long haul reflect that kind of managerial insight. C&NW hunted for ways to reduce rates when many carriers were unsure of the approach needed to deal with shrinking profit margins.

● **Grim news at C&NW in 1956.** When the curtain went up on the new North Western 10 years ago, only the leading men in the cast (and possibly the shippers, among such onlookers as employees, shareholders, financial experts, other railroad men and the public) felt a comeback was even possible.

C&NW news in early 1956 was enough to discourage even determined optimists. Aside from the loss of $26 million in passenger operations the year before, the road lost $8 million over-all the first quarter of 1956 and $11 million by mid-year. C&NW's previous management, while making good moves —retiring uneconomic branch lines, reducing employment, dieselizing, buying substantial numbers of new cars, probing merger possibilities with Milwaukee, ordering bi-level commuter equipment and installing welded rail—had not been able to halt C&NW's downward slide.

C&NW sought rate increases in the early Fifties as an offset to ballooning costs, especially labor costs. None of it seemed to have had much effect on over-all results. "Everything we did seemed to turn up two other things that desperately needed action," recalls a C&NW veteran. "We were being bled at a thousand places by people and practices that were hard to get at."

● **Saving pencil stubs.** The old



North Western system, above, will be greatly enlarged if all of Chairman Ben Heineman's merger plans are successful.

switchman's tag for C&NW (the Cheap & Nothing Wasted) was actually quite inaccurate. While saving string and pencil stubs was an art in many lonely Iowa and Wisconsin stations (a magazine carried a story in the early Fifties about an agent at a one-man station who had saved two drawersful of pencil stubs from his work of 42 years), there was internal and external waste. It is now apparent there was outside waste because of missed opportunity as the road tried to pry apart the narrowing gap between revenues and expenses by seeking rate increases. Shippers weren't buying and the competition kept capturing vital chunks of C&NW's tonnage.

On the inside, C&NW was a road that gloried in having the world's largest freight yard at Proviso (a yard that some experts figured was 50% waste space), and an LCL house that could house 700 cars at a time—for traffic that C&NW handled at a substantial loss. Serious problems were getting more acute with every wage increase. C&NW was already burdened with the highest ratio of wages to revenue in the industry. There were, for example, more than 500 crossing flagmen on the payroll. There were hundreds of one-man stations scattered over the C&NW system that could not be economically justified.

The C&NW annual report for 1955 is an interesting document. It noted that the board of directors had "requested" that the president call in outside accountants to audit the company's financial statements for 1955. "This was a forward step because no such audit had ever before been undertaken," the report told C&NW shareholders. In the same statement appears what must be one of the most curious phrases ever to appear in a railroad annual report: ". . . the board recognizes what is known in railroad circles as deferred maintenance."

● **Good news in a footnote.** That same annual report carried the best news beleaguered C&NW shareholders had gotten in years. In a footnote at the bottom of page two appeared the information that, on March 2, 1956, Ben W. Heineman was elected chairman and chief executive officer and that Clyde J. Fitzpatrick (then operating vice president of Illinois Central) had been elected president of C&NW—effective April 1, 1956.

On that April Fools' Day in 1956 began a decade on C&NW that was to see the road achieve a dramatic comeback, make Heineman a leading industry figure (he first appeared in the industry in 1950, as attorney for a group of Chicago Great Western stockholders) and make C&NW one of the most publicized railroads in the country.

● **C&NW made good copy.** The struggle to straighten out the wobbly C&NW of 1956 was chronicled in most major newspapers and financial journals—many times over. Even literary journals like the Saturday Review, Atlantic and Harper's have treated their audiences to highly entertaining (if somewhat simplified) accounts of the Heineman-Fitzpatrick struggle to right the listing C&NW.

Most of the stories, however, focused upon the merger maneuvering of Heineman (now recognized as one of the most astute industry strategists to come along in years), the rebuilding and success of the road's commuter service at Chicago, and on the 1962 Telegraphers' strike, when Heineman stood eyeball-to-eyeball with Telegrapher Chief George E. Leighty and refused to back down from his principles. It was a moment when Democrat Heineman, with his taste for books, avant-garde art and all, made even the flintiest of the industry's conservative chieftains sit up and take notice.

One of the funniest (and sincerest)

tributes ever given to Heineman came after the strike, in the Chicago Traffic Club bar. A portly, extremely Republican railroad vice president told his guests that Heineman handled the strike "just as well as if he'd been a Republican."

But, by and large, stories about C&NW dealt with relatively minor aspects of the road's reformation. The business and financial press generally made much of the merger moves and the up-and-down progress of C&NW's financial performance and share prices. The newspapers focused primarily on the unusual news coming out of C&NW's commuter operations, merger talk and on the attractive human-interest angles that can be developed from such a complex, articulate man as Heineman.

• **Shippers know real story.** Of the various audiences that have read about and watched C&NW during the last decade, probably only C&NW's men and the road's shippers are aware of C&NW's larger and more important accomplishments in the last 10 years. They are the ones who know about the rate reductions, the new equipment, the improved schedules and services, the new power, the industrial parks, the new port facilities, the upgraded plant and the aggressive marketing that marked the new management's quest for internal efficiency and external effectiveness as a competitor.

A security analyst sums it up this way: "The merger news is all talk and hope, the commuter business, when all is said and done, is still only 6% of C&NW's business. But the road's shippers and freight tonnage are where the real turnaround at C&NW was accomplished. That's where the road's real strength has been a-building. Where else do you think Heineman got the money, leverage and credit to go bidding for Rock Island? Or to buy a $90-million chemical corporation when he decided on some contracyclical diversification for C&NW?"

• **Action at the top.** Contact with shipper requirements and competitive realities was quick once C&NW's new managers took over 10 years ago.

There was a lull for a few weeks after Heineman and Fitzpatrick moved into adjoining offices in C&NW's executive suite. Then the astonishing activity at the top began. It was to continue unabated for 10 years. It is still going strong and, if anything, is stepping up as the road continues to hack at internal inefficiency and improve its competitive position against trucks and barges operating in C&NW-land.

For weeks Heineman, with his quick, incisive intelligence, and Fitzpatrick, the practical, hard-boiled operating chief of IC whom Heineman had chosen to be C&NW's president, were everywhere on the railroad—evaluating men, plant, machines, operations, equipment and organization.

A C&NW trainmaster wrote to a journalist friend during that period: "The new chairman has an uncanny knack of asking questions that make you feel uneasy. Mr. Fitz doesn't say much, but he scribbles lots of notes." So began what has proved to be one of the most memorable collaborations in the history of railroad renovation.

• **Meeting problems, head-on.** Little more than a month after they moved in at C&NW, Heineman and Fitzpatrick began making the tough decisions that were to become mileposts on C&NW's comeback journey. The quick, resourceful response to the road's problems illustrates both the magnitude of C&NW's trouble and the tough, analytical framework within which the road's new management energetically set out to restore some luster to what was once one of the bluest of blue-chip railroads in the U.S.

On May 10, barely six weeks after the new management took over, C&NW retired 116 steam engines and announced that all freight and passenger service was dieselized through more efficient scheduling of the road's 710 diesel locomotives. A few days later, reorganization of the road's operating department swept away the posts of four district superintendents and placed operations on a divisional rather than a departmental basis. (In later years, after C&NW pared down to competitive weight by reducing employment from 27,000 employees in 1955 to about 14,500 in 1965, it was not often noticed that the road had made even sharper cuts in supervisory and middle-management ranks than it had among contract workers.)

In quick succession, decisions were made to expand track rehabilitation, bridge and roadbed programs; to install new accounting and reporting procedures; to reorganize the road's industrial development department and purchasing department; to shut down a third of giant Proviso Yard (and release about 74 acres for eventual industrial development); to build a $6-million freight-car shop at Clinton, Iowa, (to replace 14 obsolete facilities) and to bring in highly qualified new men wherever there were not men suitable for promotion.

• **Plugging the leaks.** With passenger operations resulting in a $26-mil-

Selected ten-year operating and financial data for C&NW

	1965	1964	1963	1962*	1961	1960	1959	1958	1957	1956
Operating revenues (000 omitted)	$227,589	$220,811	$218,923	$196,961	$218,117	$207,282	$213,350	$215,127	$218,483	$225,787
Operating expenses (000 omitted)	181,152	182,075	179,093	169,218	176,849	178,580	182,887	178,234	186,670	198,211
Net railway operating income or (loss) (000 omitted)	15,516	12,400	11,318	(630)	10,746	(1,263)	3,124	8,861	5,470	131
OTHER INCOME (000 omitted)	7,453	5,684	7,035	8,861	2,582	2,832	2,445	2,258	1,937	1,919
INCOME AVAILABLE FOR FIXED CHARGES (000 omitted)	28,073	18,084	18,353	8,231	13,328	1,569	5,569	11,119	7,407	2,050
FIXED CHARGES (000 omitted)	9,004	6,923	6,791	6,997	7,213	5,710	5,420	5,260	4,784	4,540
CONTINGENT INTEREST (000 omitted)	3,005	3,038	3,038	3,038	3,039	3,039	3,039	3,039	3,039	3,039
NET INCOME OR (LOSS) (000 omitted)	16,$64	8,123	8,524	(1,804)	3,076	(7,180)	(2,890)	2,820	(416)	(5,529)
Average number employees during year	14,423	15,252	15,883	16,075	16,505	17,311	18,229	18,449	20,933	24,795
Diesel locomotives (units)	729	729	734	744	747	759	693	701	700	710
Freight-train cars	43,423	42,065	41,737	41,838	43,426	44,308	40,581	41,239	40,712	42,346
Passenger-train cars	279	296	413	447	471	633	802	853	957	1,085
Capital expenditures (000 omitted)	47,418	30,075	23,321	15,936	21,313	26,883	25,382	25,704	21,240	32,356
Long-term debt including current maturities (000 omitted)	295,769	225,795	224,173	225,896	235,497	242,364	217,853	220,734	212,380	219,976
Miles of road operated	10,362	10,432	10,462	10,547	10,702	9,521	9,284	9,309	9,297	9,362

*Data for 1962 reflect effects of 30-day Telegraphers' strike.

'Railroads must agree on what it is they do well'

Ben W. Heineman has been described as a professional problem-solver. He had problems enough to solve at C&NW the past ten years. Many railroad men—and all C&NW shareholders—think he handled them brilliantly.

He caused a stir among railroad men in the Midwest late last year when he made a problem-solver's stab at prescribing for maladies that afflict the industry. He called for railroads to "analyze clearly the problems and opportunity of the industry" and to have the "toughness of mind and basic courage to make clear to the public, to the government, and to our co-workers what such analysis discloses to us."

Heineman said competition forces the industry to be price-conscious: "Some railroads still believe rate reduction to meet truck competition is unwise because in reducing rates to meet 10% of competition they also reduce rates on 90% of a given commodity. The hope is that by doing nothing, the competition will go away. Competition doesn't go away. It increases."

The rail industry, says Heineman, has carried a great deal of "fat." Stripping it off "will permit us to absorb cost increases in labor and materials for longer than our competition is able to absorb them.

"We must agree on what we do well. Then we must cut the fat to permit us to do it at the lowest possible price. Then we will be able to rebuild our volume on a sound basis and again be adding employees—on a sound basis."

Heineman wants agreement on "the important objectives of the industry. . . . This great industry must come as closely as possible to having a unified voice and objective. If we are granted the wisdom to arrive at a consensus, a genuine consensus, as to what the course of this industry should be, and are granted in addition the courage not to be diverted from this, but to stay with it despite all conceivable challenges and obstacles—we'll be a great industry for a long time to come."

Asked what such an industry consensus ought to include, Heineman reiterated his previously expressed strong feeling that the industry ought to make clear to government, public and to itself that trucks and barges do not carry passengers at a loss and neither can railroads if they are to perform basic functions to the country's benefit.

But, importantly, Heineman thinks the industry ought to achieve:

—Agreement, generally, that price is the essence of competition, and that the industry *must* have the right to reduce rates.

—Agreement on car ownership—as to who is obliged to own what kind of cars and in what quantity.

—Agreement on a central system, perhaps a separate, jointly owned computer company, with basic responsibility (and authority) for equipment distribution.

—Agreement on a unified approach to changing work rules in the industry.

—Some kind of internal consensus on mergers "would be helpful. It would be difficult but not impossible to achieve."

Achieving agreement in these areas would, he thinks, enable railroads to solicit the support of shippers, labor and the public and to present to Congress a program which all strongly support. "If the approach is forceful and united enough, shippers and the administration will support it."

Obstacles to such a consensus are:

—The difficulty of getting railroad presidents together. "And even if you do get them together, you're not likely to get much done because the homework will not have been done."

—The strong individualism prevailing among industry chiefs. "Responsible, as they should be, for their companies, they tend to look pretty closely at short-range difficulties rather than at long-range benefits."

Heineman sees strong staff work as a way around some of the obstacles. "Agreement might be possible if staff work was done well. There should be at least a year of preparation by first-rate people putting problems in focus. Meetings would be a waste of time without such preparation.

"Above all, there has to be desire and motivation before such a consensus can be achieved. Objectives on a national, unified basis are necessary to get the fat out of operations and to put a fine edge to our competitive capability.

"But before we can even make a beginning, an industry group has to sit down and examine the feasibility—and value—of such a consensus."

lion deficit in 1955, and with an $11-million over-all C&NW deficit in mid-1956, Heineman recalls, "We put tourniquets on everything in sight." Associates say that during those first few tense months there was some concern lest there not be enough cash to meet payrolls in the third quarter.

On Oct. 25, 1956, seven months after C&NW's new management took the railroad in hand, the railroad made the first of a series of moves to plug the cash leaks caused by passenger trains. In an unprecedented move, it petitioned the Wisconsin Public Service Commission for permission to take off 21 trains, pleading the loss of $2 million annually. In return it offered to buy new equipment to improve other trains. It was the first big move against passenger losses and was to be characteristic of dramatic C&NW action that reduced passenger losses from $23.4 million in 1956 to $1.6 million in 1965.

● **Hitting a low.** The road's working capital declined from a meager $2.1 million at the end of 1955 to $47,417 at the end of 1956. The $5.5-million deficit at the end of 1956 forced the new management to suspend payment on C&NW's second mortgage bonds and on sinking fund requirements that were payable only if earned. Cash brought in by sale of scrap and real estate made it seem that C&NW was staying alive by cannibalization of its own assets.

Hope stirred early in 1957. When the year began there were a lot of new faces on the C&NW. The average age of the road's executive officers was 48.6 years, compared with 55.3 years at the start of 1956. The railroad pushed industrial development of 6,200 acres near Peoria, Ill., announced a $5-million program to automate crossings, discontinued its free LCL pickup and delivery service (which was losing $1.5 million annually), bought a quarry to insure a supply of reliable ballast for its stepped-up roadway programs, bought the Litchfield & Madison for $8 million, hired outside research experts to survey C&NW's real estate, began expanding TOFC service, created a motor carrier division to handle its expanding TOFC traffic and pushed programs in South Dakota and Minnesota for central agencies to replace the network of inefficient small stations that were draining C&NW's resources. The central agency set-up was later applied to the road's extensive network of stations in Iowa, Nebraska, Wisconsin and other states and, ultimately, it led to the Telegraphers' strike of 1962.

● **Getting to the corner.** At the end of 1957, one could hardly say that

C&NW had turned the corner. But the road was getting into the corner's neighborhood. The $5.5-million loss of 1956 was virtually eliminated, even though operating revenues dropped more than $7 million. And, during that first full year of plugging up C&NW's cash leaks, the new management began to focus on the railroad's outside problem—the competition.

Said Heineman, 18 months after becoming chairman of C&NW: "We have the unalterable conviction that the industry as a whole has been suffering from persistent erosion of its proportion of total intercity freight. While there are many contributing causes for the gains recorded by competing modes of transportation, not the least of these are the many railroad rates fixed at unrealistically high levels without regard to competition." The statement was a tip-off to C&NW's competitive strategy from then on.

• **Seek outside help.** C&NW began going to the outside for help when it needed answers to real estate, market and passenger problems. The road has, over the years, spent thousands of dollars buying the services of professional researchers and consultants to get to the heart of problems in iron-ore movements, industrial park location, commuter data of all kinds, diversification and other problems where C&NW felt it best to get advice from independent specialists.

Says a spokesman, "It's dangerous to have fixed notions in some areas when you're about to commit substantial effort and capital. We at C&NW don't merchandise to please ourselves. That's why we so often call in outside research firms. They're more hardheaded and are less apt to get emotionally involved."

In 1958, the railroad cut 24 hours from its Chicago-West Coast schedules (via its UP and SP connections). It dismantled its 21-acre freight house at Proviso, began system-wide training of sales personnel, and continued to attack internal inefficiency by pushing central agency systems. C&NW secured approval from the Illinois Commerce Commission for a package of proposals on its commuter operations that were to result in a completely modernized service. The road also substantially boosted plant upgrading, equipment acquisitions and car-repair programs.

Of equal significance in 1958, however, were reduced rates C&NW installed on intrastate shipments of corn, oats and soybeans in Minnesota—and its application for rate reductions on interstate shipments of corn, sorghums and soybeans to Chicago, Milwaukee, Minneapolis, St. Paul, Sioux City, Omaha, Kansas City, St. Louis and Peoria markets. Multiple-car rates on pulpwood were announced. Freight train schedules were again tightened. C&NW pressed tax claims against the U.S. They were to prove important in the road's rehabilitation.

The railroad established a foreign trade department (in response to the St. Lawrence Seaway) and published a Foreign Trade Handbook to inform C&NW men and Midwestern shippers on the terminology and techniques of foreign trade for proper use of the Seaway.

Orders were placed for an additional 36 double-decker commuter cars (costing $5.6 million). C&NW announced a $9-million rehabilitation program for 8,000 freight cars, the beginning of a series of massive programs and equipment acquisitions that were to result in reduction of C&NW's per-diem deficit from $6.5 million in 1955 to $764,000 in 1964.

• **The bets looked bad.** For a road that zigzagged above and below the break-even point all the way into the early Sixties (the $1.8-million loss in 1962, the last deficit year, was attributed to the Telegraphers' strike that year), C&NW pushed some muscular capital-spending programs from the very beginning. Programs stayed in the $21- to $26-million range (except for the strike year) until an upturn in revenues enabled C&NW to spend $30 million in 1964, more than $50 million in 1965 and announce a record $66 million in capital improvements for 1966.

In retrospect the capital-spending moves before the upturn look inspired, but at the time they looked like bad bets to many in the industry, the financial community and to the investing public. When Heineman and Fitzpatrick took over at C&NW, the road's common stock was selling at around $27 and the preferred around $37. By mid-1962, fading of confidence by the investing public could be seen in the abandonment of C&NW by the investment trusts and other institutional buyers. C&NW common was selling for $8.75 a share.

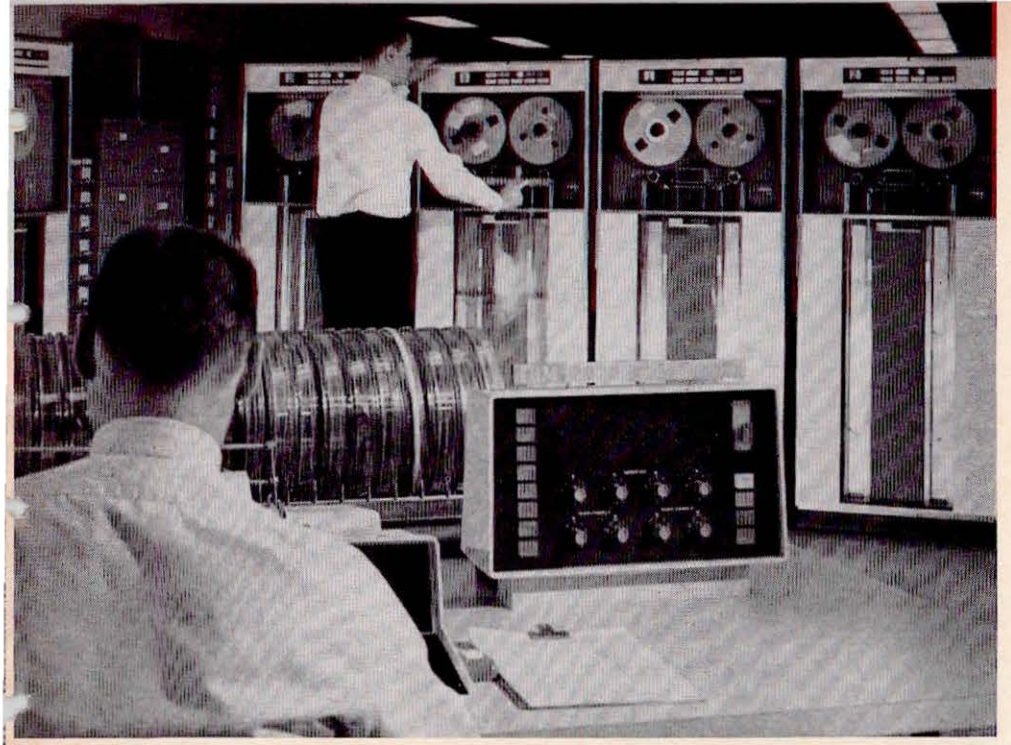
• **C&NW shapes up.** If misgivings existed up in C&NW's stark, ultramodern executive offices, they did not reflect in either the direction or tempo of the road's internal or external actions. C&NW accelerated consolidation and elimination of facilities, getting rid of unnecessary tracks around terminals, tearing up unneeded tracks in small towns and passing tracks too short to hold modern-era trains. Stations were closed by the hundreds, reducing maintenance substantially. Stations on lines where passenger service was eliminated were torn down and the land turned

ROAD'S COMPUTER CENTER at Ravenswood

New facilities

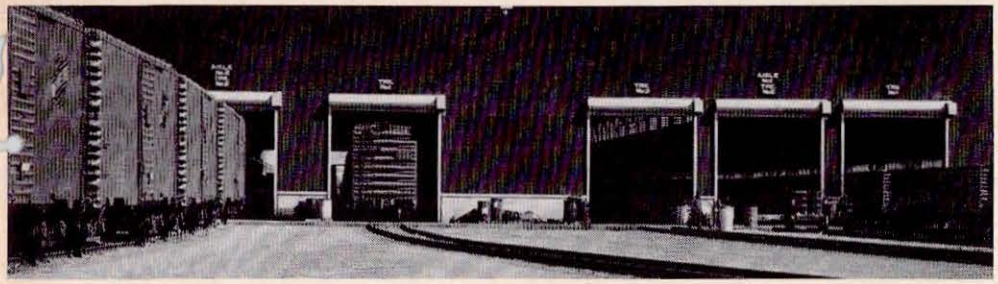
NEW $1-MILLION PIGGYBACK PLAZA at C&NW's Proviso Yard is key facility in road's booming TOFC business.

TRACK MACHINERY of all descriptions has helped C&NW upgrading programs.

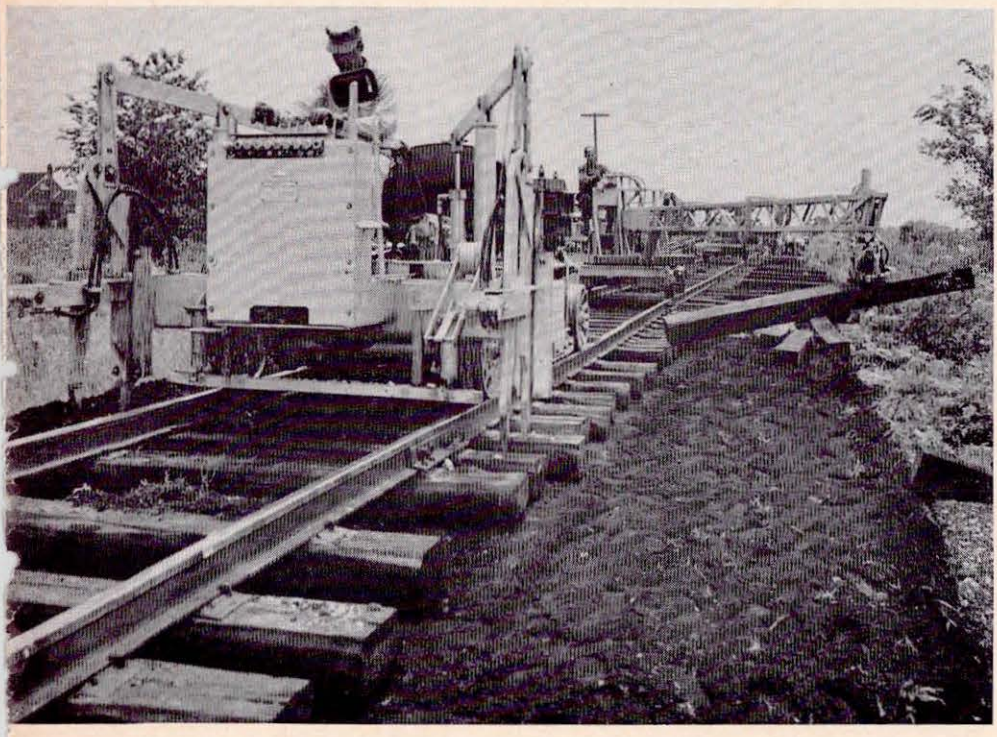


(Chicago) will get two large RCA Spectra computers and an IBM 360.

help spark C&NW comeback



C&NW'S $6-MILLION CLINTON CAR SHOPS will have rebuilt 53% of the road's entire carfleet at the completion of the current year's program.



to other uses. Management appropriated money ("Even when it hurt," recalls one C&NW officer) for mechanization of track work—$11-million-worth of machines—and stepped up programs wherever programs could quickly pay for themselves.

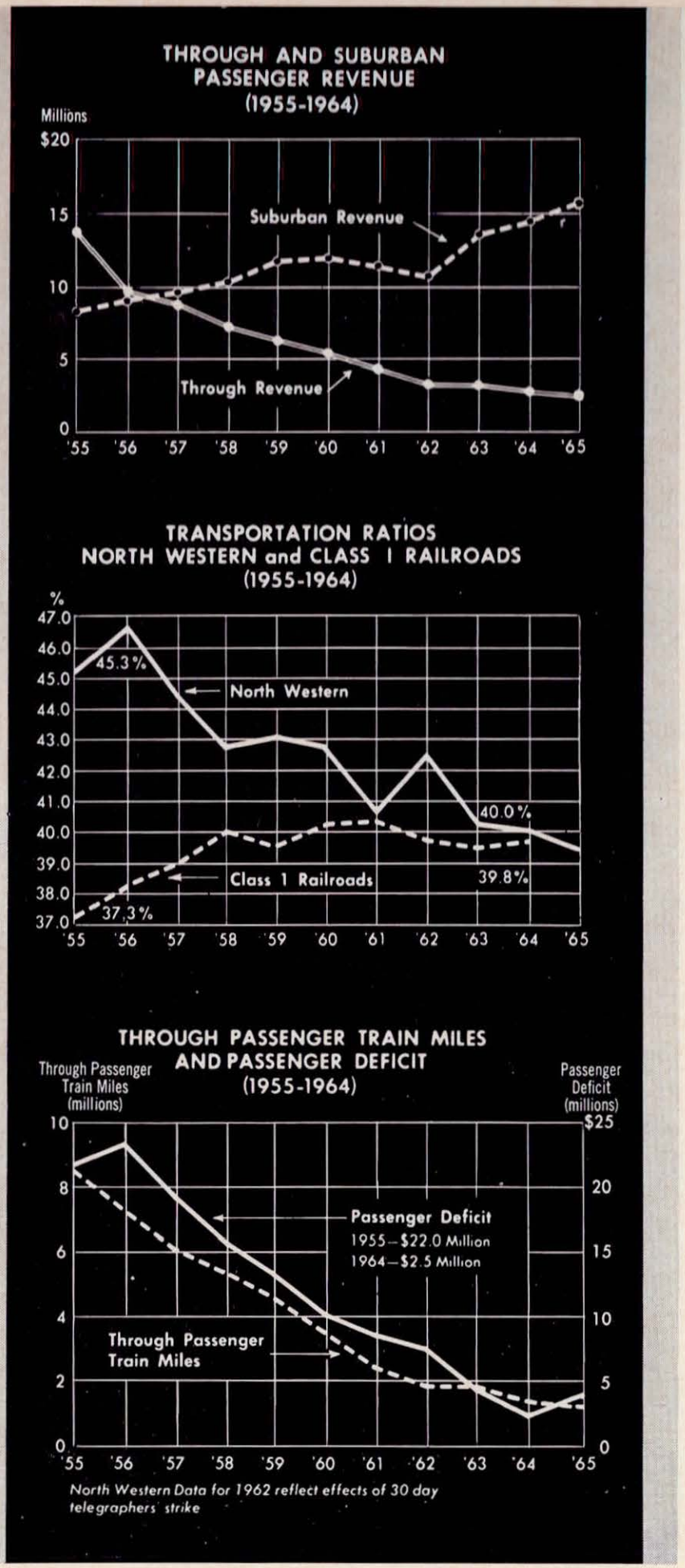
Chairman Heineman's conviction that "price moves merchandise" was the ruling axiom in C&NW's external moves as the Fifties closed. C&NW began making competition with incentive rates on butter, reduced rates on iron ore, livestock, lumber, coal, corn and many other commodities. The moves held—and in some cases substantially increased—tonnages of C&NW's 10 largest revenue-producing commodities. Pressure was constantly applied to reduction of passenger losses. Passenger train miles were reduced from 8.6 million in 1955 to 1.2 million by 1965.

• **Internal optimism high.** Expansion of the road's commuter operations (as the C&NW probed the possibilities for profit from this unlikely direction) came right after the start of 1960 when the road announced a $29,554 profit on 1959 commuter operations. The road converted 45 locomotives for push-pull operation, and ordered 116 more bi-level coaches for such operations, giving it a fleet of 200 modern, double-deck coaches.

The road reduced grain rates on points west of the Missouri River, again expanded its industrial development department, scrapped whole fleets of obsolete suburban and passenger cars, reduced rates on iron ore to offset competition from foreign ores, agreed to buy 1,500-mile Minneapolis & St. Louis for $20.9 million, handled the first bulk cargo (inedible tallow) through Navy Pier at Chicago and kept pressure on regulatory agencies for reduction of losing passenger trains.

In mid-1960, testifying before the Surface Transportation Subcommittee of the Senate Commerce Committee, Heineman cited what must have been a substantial factor in C&NW's decline in the post-World War II years: In the 13 years from 1947 through 1959, cumulative losses from passenger train operations on C&NW totaled $287 million.

Later in 1960, Heineman, in a speech, deplored the lack of coordination in planning metropolitan transportation that forces commuter operations to compete with public funds. He offered to sell C&NW suburban facilities rather than enter such competition. It was an offer he was to make even after the service became profitable. Just a few weeks ago, just after it was announced that C&NW's commuter trains produced a $1.38-million net in 1965, Heineman told a Boston audience



he would sell C&NW's commuter operation "lock, stock and barrel" rather than compete with public money.

● **More in early Sixties.** Computers, microwave, massive car-rebuilding programs, additions to the commuter fleet as passengers increased, reduced rates and a systematic upgrading of suburban stations and construction of a $1-million TOFC terminal at Proviso were highlights of progress internally and externally at C&NW up to mid-1963, when Heineman and C&NW made headlines everywhere by deciding to fight moves by Union Pacific for control of Chicago, Rock Island & Pacific. C&NW filed application for control of Rock Island, made a counteroffer to Rock Island's shareholders, and began what is proving to be the noisiest, most complicated fight for control of a railroad that the industry has seen in many years.

The road cleared up interest arrearages on its bonds. It reinstated preferred dividends as Christmas of 1963 neared. Profits of $203,000 for 1963's commuter operations were included in C&NW's net income of $8.5 million from railroad operations that year.

● **More merger action.** As 1964 got under way, C&NW announced more unit coal trains, sold lakefront land in Milwaukee and spent $1.3 million dredging and constructing a facility at Escanaba, Mich., enabling deep-draft vessels to load there.

In mid-1964, Heineman's outspoken convictions about the need for consolidation of Midwestern rail systems (based upon plans formulated by industry experts during the depression era) began to show up in C&NW moves to consolidate with neighboring railroads. C&NW and Chicago Great Western announced they were negotiating terms for merger. By Sept. 1, both C&NW and CGW boards approved the merger terms that had been worked out. Exactly two weeks later C&NW and Milwaukee announced agreement on plans to merge. The C&NW-CGW merger plan was recently approved by an ICC examiner (RA, March 14, p. 7).

At year's end, C&NW's board declared a $3 dividend on common stock to be made quarterly in 1965 on 1964 earnings (which came to $23 million, including special credits from sale of real estate and refunds of state and federal taxes amounting to $15 million). The road posted a $706,000 profit on its commuter operations at the end of 1964.

● **Last year, diversification.** C&NW's gains could be gauged early last year when it announced $45 million in capital improvements (this was later increased to more than $50 million). C&NW bought abandoned Chicago North Shore & Milwaukee right-of-way

Commuter trains roll toward another record

C&NW's commuter trains may be push-pulling their way to an even better showing in 1966 than they made in 1965—and last year was a tough year to top. The service rang up $1,387,000 in profits on $15,657,000 paid in by 21,361,000 Chicagoland riders last year. All trends are up substantially so far this year. Especially intriguing to C&NW officers is the fact that the modern, bi-level cars are attracting non-rush hour riders at a greater rate than the rate at which rush hour riders are increasing.

With 32 of C&NW's 220 commuter cars due to be paid in full next year (and with about a third of the entire C&NW commuter fleet already paid for), diminishing equipment payments and interest charges are factors that could powerfully amplify the profit potential of the service from now on out.

C&NW is not depending upon equipment alone to build its commuter business. It currently spends about $300,000 a year in advertising that tells Chicagoans to "go North Western." (It is also carefully eyeing problems involved in freight advertising.) It spends thousands of dollars researching commuter habits, opinions and quirks. It is also pushing reconstruction and modernization of commuter facilities along its lines at a four-or-five-station-per-year clip.

in Kenosha and in Illinois, and continued its attack on competition and internal inefficiency. Last March, C&NW and Milwaukee approved merger terms. Rates on corn in the Midwest to export markets via the St. Lawrence Seaway were cut.

On June 14, C&NW announced it had agreed to buy the Velsicol Chemical Corp. for $90 million, and was endeavoring (successfully, as it turned out) to buy 230,000 shares of Michigan Chemical Corp., (a Velsicol subsidiary) at $33 per share so that it could file a consolidated return.

By late last year, C&NW was back in the thick of the contest for control of Rock Island when the Interstate Commerce Commission approved its application for authority to make its existing exchange offer available to Rock Island shareholders who hold Union Pacific certificates of deposit. By late last year, too, C&NW saw a substantial group of other Midwestern railroads—including Milwaukee, Santa Fe, Missouri Pacific, Frisco and other roads—also opposing Union Pacific control of Rock Island.

● **Change is relative.** By 1966, C&NW was shaping up — fast. The road's shares are now bought avidly by investors convinced that C&NW and its remarkable chairman are on the way to bigger, better and more profitable years ahead. The road's internal reworking is hardly over. As one veteran observer puts it. "A railroad takes a long time to go downhill, and it takes just as long to build it up again." But the road is handling its trains economically and building capability at an accelerating clip.

Early last January, C&NW's $66-million capital improvement program, largest in the company's history, caused a stir. The program, noted Heineman, "will enable us to accelerate our program of tailoring our services to the needs of our customers, and also help increase our over-all operating efficiency, thereby enhancing our ability to maintain or reduce our present level of freight rates."

● **Now, faster progress.** Massive equipment purchases and equipment rebuilding programs from 1962 to the present have had a dramatic impact upon C&NW's once-ancient carfleet.

The road has placed orders for two RCA Spectra computers and for an IBM 360. Additional hotbox detectors are being added to C&NW's main lines. A $6-million elevator capable of holding 5,000,000 bushels of grain at Superior, Wis., will be completed this spring and leased to Continental Grain.

C&NW is leasing, in a single order, more than 2,000 radio units and equipping all locomotive cabs, cabooses and 170 way stations with two-way radio. As part of the program (aimed at developing greater efficiencies in operations over the road as well as in yards), head-end brakemen will also have portable walkie-talkies to use when they must be down from the cab.

● **What's ahead?** One commodity that is not in short supply at C&NW these days is know-how. Larry S. Provo, C&NW's vice president-finance, notes that while progress is still needed in many areas of C&NW's operations, "We nonetheless have already made operations sensitive to management control and competition. That makes progress more possible.

"If we did not have a thing to do in the next 10 years but consolidate with CGW and Milwaukee, that would be a great accomplishment in itself.

"We expect good results from our diversification. Chemicals have a much greater growth factor than railroads. A growth of 15% per year is not unusual in the chemical industry.

"Above all, more accurate decisions are ahead. It has been difficult to arrive at decisions because the industry is so large and complicated. We used to have 25% facts and 75% judgment enter into decisions. We hope to see that reversed one of these days. We've already come a long way. We're honing down the decision-making process here at C&NW."

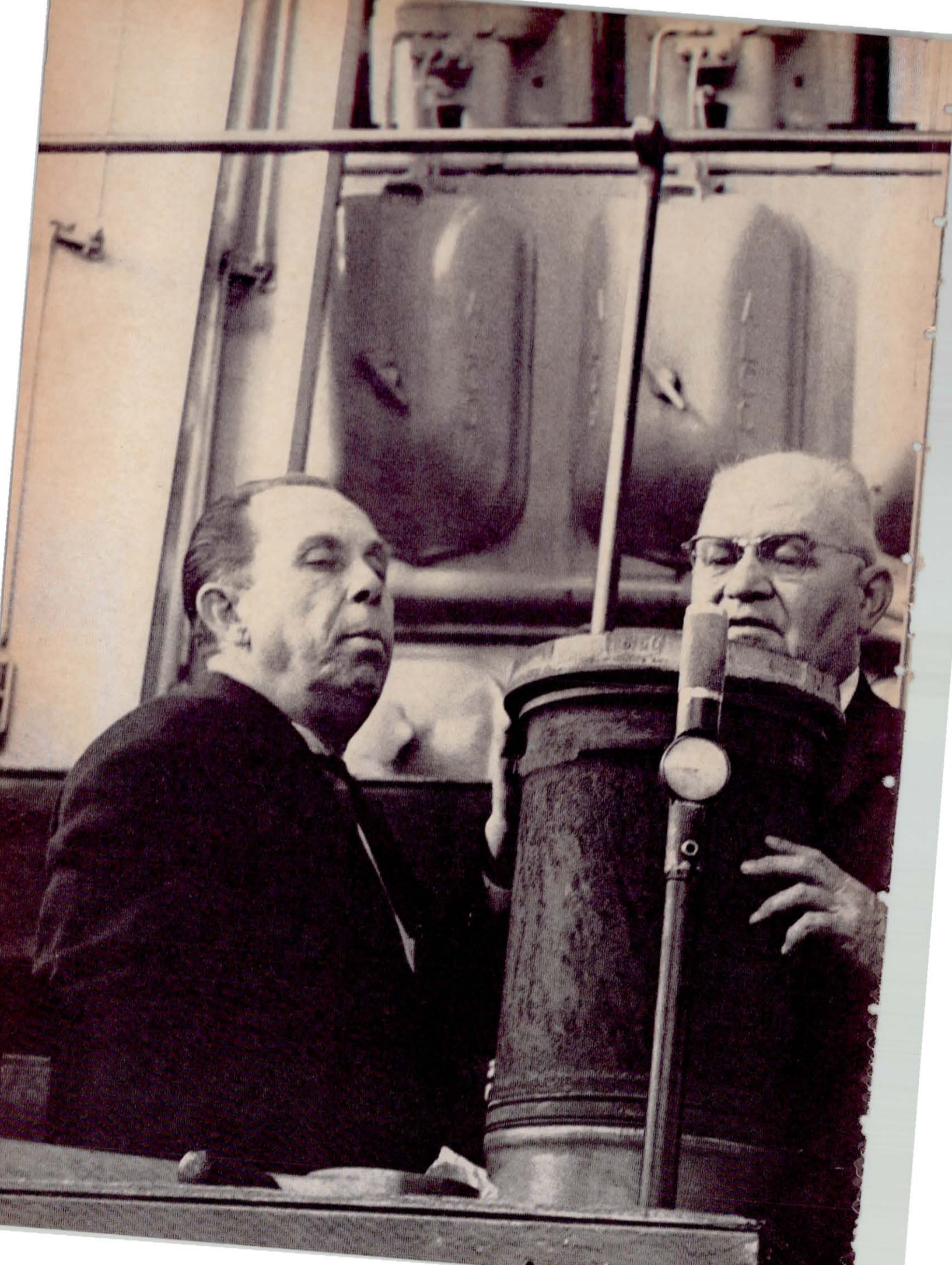
● **Need freedom to react.** Heineman, a man who has done much to make the long-range approach more common, thinks prospects are bright for railroads generally and C&NW particularly—if there is no business downturn, if concerted industry action unfreezes the rate apparatus.

"When business slows down, whether in the shirt business or any other business," he says, "there is a natural tendency to cut prices. Our trucker and barge friends are all able to make 'instant bargains' to haul bulk commodities. The railroads cannot unless they get legislative relief. If, when a downturn comes, railroads do suffer—as they may—it will because of the rigidity of the price structure upon us but not upon our competition."

● **Not all roses.** Another C&NW officer, noting that he feels C&NW is still a marginal property, admits the past 10 years were not without errors of commission and omission. "Sure, we've made our share of bad moves—and some of them were beauts. No one can ever say definitely what value we missed by not making certain moves we could have made. We are painfully aware of the cost to C&NW of moves we did make that we shouldn't have made. We made some costly mistakes, for example, with reduced fares on through-passenger trains. We'd have done better to raise the fares.

"But, the important thing is that we react to facts—and we make a determined effort to get the facts. We've done a lot. We've got a lot to do. You can't say we're passive about events here at C&NW. We're moving."

● **A taste of success.** C&NW, having written a dazzling comeback story, begins 1966 with vitality, ideas and momentum. Its management is young and has had an exhilarating whiff of success. That's a magic mixture. ■



After three years and 400,000 miles the Seaboard overhauls their ALCO Century 420's.

They could've waited another year.

From now on, according to Joseph N. Broetzman, General Manager of the Seaboard Air Line Railroad Company, they'll run their Century 420's four years before calling them in for major overhaul.

This was Mr. Broetzman's decision after he had the Model 251 power assemblies changed in ten of his ALCO Century 420's. Each Century locomotive had served the Seaboard for three years. Each had logged more than 400,000 miles.

The Seaboard gives locomotives a rugged test. Every day they haul perishables and piggyback loads on high-speed passenger schedules. At the same time, the Seaboard gives heavy drag service like moving phosphate rock unit trains.

Many other railroads have discovered that ALCO Century locomotives have what it takes. One of the reasons why is ALCO's Model 251 diesel engine. This proven engine performs effectively under all kinds of operating conditions.

But you don't have to take our word for it. Just ask men who know their locos best... then call your ALCO man. He has information on the complete Century line: Century 855... 5500 hp; Century 643-H...4300 hp diesel-hydraulic; Century 630...3000 hp; Century 430...3000 hp; Century 628...2750 hp; Century 425...2500 hp; Century 424... 2400 hp; Century 420...2000 hp; Century 415...1500 hp; and DL-440...1000 hp.

ALCO PRODUCTS, INC.
Dept. 309-10, Schenectady, N.Y. 12305

ALCO

Joseph N. Broetzman (center), General Manager of the Seaboard, along with E. P. Bledsoe (left), Shop Superintendent, and T. H. Stoudenmire (right), Roundhouse Foreman, have just "miked" a cylinder liner after removing it from one of their ALCO Century 420's that had been in service three years. Decision: the engine could have operated another year.

Circle 7 on reader service card

STEAM POWER is still evident in many parts of the Soviet Union, although dieselization and electrification are making great strides.

THE SPRATTS—MINUS ONE are shown on the trip. Twins Richard and Robert, front; rear, left to right, Mrs. Spratt, Barbara, Roger Jr.; and Nancy. Dad took the picture.

Playing the game of Russian roomette

Crossing USSR by train was exciting for a family of seven.

The best way to see Russia, Roger Spratt had always believed (and still does), would be to travel across it by train: "There's not much to be seen from an airplane window."

So, when he was recently transferred from his oil company job in Japan to New York he decided that the time had come for his long-awaited rail trip across some 6,000 miles of the USSR.

Spratt, like others in the West, had heard reports that travel in the Soviet Union can, at times, be hectic because of bureaucratic red tape and inadequate tourist accommodations. But he was determined to find out for himself—and he was going to do it in a manner that would make a less intrepid visitor to the Soviet Union wince. He planned to take along his wife and five children.

• **Looking back on it.** The seven Spratts, now settling into a new home in New Brunswick, N.J., look back on the experience as frequently enjoyable, sometimes frustrating, but always interesting.

The Spratts spent the better part of two weeks in the Soviet Union, stopping off in Moscow, Leningrad and other cities for sightseeing along their 6,000-mile route from Nakhodka on the Sea of Japan to Vyborg on the Finnish border. Why did they choose the mode and route of travel they did?

"Because it's a good way to be with the people," says Spratt. "We think that it's important we know something about the Russians and that Russians know something about Americans." And the family, Roger and his wife Delores, the twins, Richard and Robert, 4, Roger, Jr., 12, Barbara, 14, and Nancy, 16, did get to meet a lot of the people.

To get on their first Russian train, the Spratts had to take a 53½-hour, 900-mile trip across the Sea of Japan from Yokahama to the USSR port of Nakhodka. Buses waited at the dock to take the passengers to the nearby railway station.

The Spratts' train consisted of ten cars—a baggage car, hard and soft-class sleepers, and a restaurant car. A two-unit diesel locomotive pulled it.

The train crew included a hefty lady doctor. There is no charge for medical service on Russian trains.

Rolling over the flat, bleak Siberian countryside, the Spratts passed a so-called "bread train," composed of five box cars and a steam locomotive. The train, they were told, carried bread from Khaborovsk to towns and villages along the railroad.

After a pleasant overnight ride, the family arrived in Khaborovsk a little after noon. Here they had to leave their train and board a twin-jet TU 104 70-passenger airliner for the 1,300-mile flight to Irkutsk, as rail travel through this portion of the Soviet Union is banned. Russian air regulations require that all cameras and binoculars be packed in baggage.

Spratt's comment on the flight: "We had a very good steak lunch and the plane was mechanically excellent. The stewardess did make sure the seat belts were fastened, contrary to rumors that the Russians never use them, and passed out candy before takeoff and landing."

• **Meeting the Chinese.** After a brief visit in Irkutsk, the Spratts prepared to resume their train journey to Moscow and learned that there had been some mixup in their train reservations. They were then assigned space on a once-a-week Chinese train which ran from Peking and Ulan Bator to the Russian capital.

"Travel on the Trans-Siberian can best be described as interesting, but grim," says Spratt. "We again traveled

hard class—four berths to a compartment, no wash basins. The cars were Russian-built, and the decor of the interiors was Chinese."

One thing that the Spratts admitted to being tired of after 3½ days on the train was Chinese music. It played continuously over loudspeakers in the compartments and passageways, and could be turned down but not off.

"The Chinese stewards were very good to us, bringing us tea several times a day (five cents a glass) and some delicious cookies. But they never smiled. The compartment was also vacuumed several times a day, and at larger cities the crew would wash down the outside of the cars."

"The Trans-Siberian is double track and electrified all the way from Irkutsk to Moscow," Spratt explained. "But from Kirov to Moscow passenger trains go north of the regular Trans-Siberian route, and when we awoke one morning there was a beautiful green steam locomotive with red wheels at the head end."

While large segments of the Soviet rail network are dieselized and electrified, steam power is still evident in most areas. At Sverdlovsk in the Urals, a rail and industrial center, there were a great many steam locomotives.

• **The Moscow underground.** In the capital city, the family found that it could easily get around with a few kopeks and a map of the Metro system. The subway, built at a great depth, is served by high-speed escalators that make U.S. types slow by comparison. Fare is the equivalent of 5½ cents, and on street cars the honor system is used. There are no conductors.

After seeing the sights in Moscow, the family boarded the famed "Red Arrow" express train from Moscow to Leningrad.

"It was nice," says Spratt, "but in all of our travels we have never seen any sleeper quite the equal of the vanishing American roomette, double bedroom or bedroom suite with private toilets, plenty of towels, warm water to wash in, ice water to drink, and paper cups."

On the final leg of the rail trip to the Finish border, the train underwent a thorough inspection by customs men and border guards, who looked under the seats and under the train.

Spratt describes it: "The train used a Russian crew and locomotive to cross the border, and with the crew's heads out the doors and a man with a machinegun following the train on foot, we left the station slowly. The gate across the track opened and we crossed the border. Then the gate closed, and our Russian adventure was complete."

R. G. LEWIS

AS THE PUBLISHER SEES IT...

DESIGN FOR LOW MAINTENANCE—Jack Brannan, chief mechanical officer of the Long Island, has shown me an editorial in Mechanical Engineering, monthly publication of the ASME, which states that the modern jet airliner, despite all the benefit of military experience and experimentation, costs two to three times its original $7,000,000 cost to maintain during its lifetime. That makes me wonder what the relative maintenance cost is for a modern road diesel. There is little doubt that all three domestic locomotive manufacturers have been competing to design increasingly low maintenance characteristics, and enhanced reliability, into diesel-electrics. Isn't this an outstanding example, by the way, of the value of the forces of competition at work in a free-enterprise system? One thing railroad men can look forward to dependably is improved equipment from their suppliers, with little or none of the taxpayers' money involved.

RAILWAY PERSONNEL SHORTAGE—Ross B. Argent, a chief inspector in the traffic and transportation department of the New South Wales Railways, has written us requesting a pamphlet referred to in an item in our issue of Oct. 4, 1965, "Railroad Jobs Described." "We are in a period of considerable industrial expansion," he says, "and the call for staff in all fields is in excess of available man-power." It looks like qualified railway men with a wanderlust ought to be Australia bound.

THE TRAVELING SPRATTS—Not too many Americans would deliberately expose themselves to a week-long trip across Siberia, and hardly any would do it with wife and five children, including twins just 4½ years old. But Roger Spratt is an intrepid traveler who had previously traveled 'round the world through Singapore, Malaya, India, Egypt and Greece with his family, using railroad transportation wherever he could. His recent Siberian journey is capsuled in the accompanying columns.

I compared many notes with RS, and found that the 3,277-mile Irkutsk-Moscow run, if not super de luxe, is at least much improved over the same trip which I made seven years ago. Among other things, the running time has been cut from 5 days and 5 nights to just 3½ days and 3 nights. Most of the route is now electrified (an alternate freight route is electrified all the way), where only segments were in 1958. I still hope to go back myself and make the rest of the run between Irkutsk and the Pacific.

COUP DE GRACE—A Grace Line steamship dealt a death blow to a New York & Long Branch drawbridge on March 3. I am among the 9,000 daily commuters whose personal lives and routine will be altered for an estimated three-month period. That is how long it will take to fabricate new steel for the superstructure and to cast and machine new supports and machinery for the turning mechanism. The bridge crosses the Raritan River from Perth Amboy to South Amboy, N.J., about midway for most commuters on the north Jersey coast lines of the Central of New Jersey and the Pennsylvania. Meantime both railroads have to provide double train service, and charter buses by the dozens for the connecting service around the damaged bridge.

Both railroads are doing a splendid job handling the "faithful" who are still going by rail. But when monthly tickets for March—just three days old when the accident happened—have expired, there will be even fewer going by train-bus-train. And while commuters are discommoded no end, costly and time-consuming detours for freight operations are also entailed. Drawbridges are expensive enough under normal circumstances, but when the river traffic for which they must be maintained knocks them out, the problems, in this case, anyway, are grossly multiplied.

MOBILE VACU-VATOR is one of units for unloading dry materials; U.S. Rubber's Naugatuck Division was first customer.

Dry bulk, liquids move by Flexi-Flo

NYC cement-handling concept is expanded for new traffic.

LINE-HAUL ECONOMY of rail movement is maximized by 125-ton cement cars.

Flexi-Flo, New York Central's rail-highway distribution concept for bulk cement, is being expanded for coordinated movements of a variety of dry and bulk liquid commodities. The first terminal with capabilities for handling dry and liquid chemicals, plastics, petroleum products and foods, as well as cement, has just been opened at North Bergen, N. J.

The road already has plans for 12 similar facilities, all of which are to be opened in strategic marketing areas this year. The terminals and the associated rail and highway services are the product of what A. E. Perlman, NYC president, calls "a fresh approach to the problems of physical distribution."

● **Inter-modal concept.** The fast, inexpensive inter-modal transfer of products from railroad cars to truck trailers is a key link in combining the advantages of low-cost rail movement with the flexibility of fast truck delivery. "Flexi-Flo," says Perlman, "depends upon the close cooperation of the trucking industry and the railroad. Due to high traffic volume, efficient and experienced personnel, and low capital investment, the New York Central transfer terminal can provide a total distribution cost to the shipper 20% to 30% below conventional methods."

Dry products are transferred by pneumatic or pressure differential devices. Liquid products are transferred by stainless-steel pumps to avoid product contamination. Each terminal will be equipped to handle all types and sizes of tank and covered hopper cars, railroad or shipper owned or leased.

● **Cement is success.** Following Flexi-Flo's dramatic reversal of the downward trend in NYC cement traffic, the road looks for big traffic and revenue gains for other commodities. In 1965 the road handled four times as much cement as in 1964. It now expects that 1966 cement volume will be

fourteen times higher than in 1964. Revenue from Flexi-Flo cement service in 1966 is expected to top $3 million. It was promotion of this rail-highway operation which recently won for NYC the RPI's 1965 Golden Freight Car Award. The railroad's 125-ton covered hopper cars developed by ACF are an integral feature of the cement service (RA, Sept. 14, 1964, p. 40).

Convenience was winning over the economy of centralized production in the cement industry before Flexi-Flo was introduced. The simplicity of job-site delivery by truck, and the difficulty and expense of transfer from covered hopper cars to storage and then to trucks for local delivery, was causing wide-spread decentralization of the cement industry.

This decentralization was causing the railroad's share of the traffic to decline rapidly, explains J. R. Sullivan, NYC's vice president—marketing. It was then that NYC planners began to work with ACF on the Flexi-Flo covered hopper. Difference in air pressure between the body of the car and the delivery truck's hopper make possible the loading of a truck in minutes with virtually no wayside facilities.

Flexi-Flo cement terminals are now located at Rochester, Syracuse and Buffalo, N. Y.; Framingham, Mass.; Indianapolis, and Louisville. Two more terminals—a new one at Boston and an expanded one at Rochester—are presently under construction to handle the full range of commodities to be moved under the new Flexi-Flo service. Another at Chicago will be started shortly. The $2.5-million investment in Flex-Flo is expected to double this year.

• **Shipper savings.** The complete transportation package which NYC provides its Flexi-Flo customers is intended to yield them substantial savings. Low-cost distribution, says NYC, should make possible the penetration of new markets. It should make unnecessary the building of new bulk terminals with their associated capital costs.

NYC handles car storage, certification of weights and sampling of ladings to insure control of product quality. The railroad handles Flexi-Flo service with all its associated services to ultimate consumer under a single tariff. Highway delivery is made for the railroad by associated trucking firms specializing in dry and liquid bulk transportation.

"The recent trend toward reducing warehousing costs and the introduction of tightly controlled inventories," says Perlman, "makes this type of service particularly attractive." ■

WATCHING **WASHINGTON** WITH WALTER TAFT

TAFT

LBJ'S TRANSPORT PLAN STARTS THE ROUNDS—President Johnson built his transportation message around two proposals: more stringent highway safety measures, and creation of a Department of Transportation to be headed by a cabinet-level officer. The first proposition is about as controversial as motherhood or the flag, and reactions to the idea are in kind. The second, however, has far-reaching implications for every segment of transportation, and is sure to have the spotlight trained on it when it reaches the floor of Congress.

The machinery for this has already begun to roll: Last week, Sen. Warren G. Magnuson (D—Wash.) chairman of the Senate Commerce Committee, introduced S.3010, which contains the proposal for the new department, and it was referred to the Committee on Government Operations. Sen. John L. McClellan (D.—Ark.), chairman of the latter committee, promptly scheduled hearings on the bill, to begin March 29. In the House, the same process is at work, but it's moving less swiftly: Rep. Chet Holifield (D—Cal.) introduced H.R. 13200 as a companion bill to S.3010, and the Subcommittee on the Executive and Legislative of the Government Operations Committee is now studying it. No hearings have been scheduled as yet.

GUARDED REACTIONS TO THE PROPOSAL—Reactions have been very cautious so far; no one either on Capitol Hill or in the transportation industry wants to tip his hand before the hearings actually get under way. Not surpris.ngly, the only flat statements of position have come either from the legislators who actually put the bills in the hopper, or from the agencies "downtown"—the Department of Commerce and the Interstate Commerce Commission.

Commerce officials were largely responsible for shaping the Presidential text and have been stumping for the proposal all along, and last week the Interstate Commerce Comission followed suit. ICC Chairman John W. Bush said that both he and Commissioner (formerly Chairman) Charles Webb had been in on Administration conferences where the idea first came up of transferring the ICC's car service and safety functions to the proposed new department. Both Commissioners, Bush said, endorsed the idea, and subsequently the Commission as a whole voted to support the President's proposal.

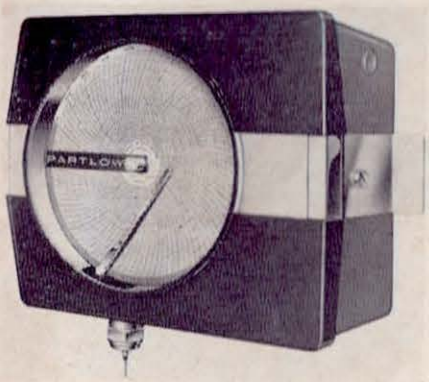
WHY A TRANSPORTATION DEPARTMENT?—Commenting on the "challenges, capacities and imbalances" that gave rise to the President's proposals, Lowell K. Bridwell, Deputy Under Secretary of Commerce for Transportation said: "All forms of transport, except the railroads and our merchant fleet, have enjoyed healthy growth and expansion. In 1945 our railroads hauled 691 billion tons; in 1965 it was only 700 billion tons . . . it seems readily apparent that some things are out of kilter, that the need for better planning and better coordination and more efficient use of our transport facilities are paramount, if we are to meet the future challenge of mobility."

Are the present modes in danger of obsolescence? Said Bridwell: "Some transportation experts suggest that we may have to create something new to cope with the traffic of the 1980s. This is what they have in mind when they suggest such things as wheel-less vehicles travelling through tunnels or troughs, on thin levels of air . . . at speeds comparable to today's conventional aircraft speeds."

"Whether such a new system actually will be needed remains to be seen," he observed, "but it's a certainty that whatever new mode or modes might come along, we will have to be getting more out of the techniques already available to us."

(Mr. Taft is on vacation. During his absence, this column is being written by other members of the staff.)

NEW **PRODUCTS** REPORT

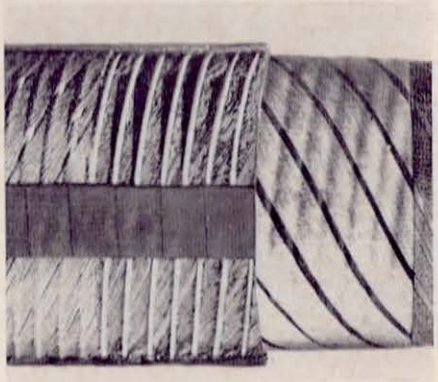


Temperature Controller (RA-1)

The Model RF heavy-duty electrical temperature recording-controller series for heating and cooling applications in the −30 to +1,100 deg F range is ambient compensated in 10 optional scale ranges. The control is available in single- or two-switch models for use with two- or three-wire circuits. Rated accuracy is 1% of scale range. The series meets both Underwriters' Laboratories and Canadian Standards Association requirements. *Partlow Corp.*

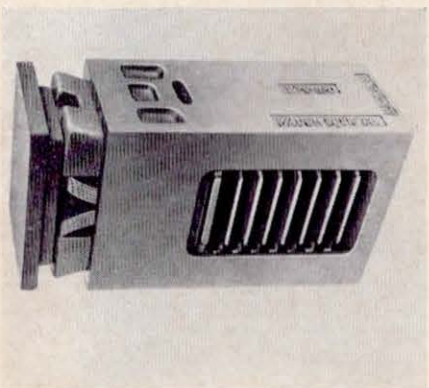
New Broom Drive (RA-2)

The Kershaw Ballast Regulator is now available with a diesel engine and torque converter with a right-angle drive to the broom attachment. With new inching control in the torque converter, the travel speed can be varied yet the broom-reel rpm remains intact. There is only one engine to maintain and service. The Ballast Regulator with Broom Attachment is still available with two engines as before. *Kershaw Manufacturing Co.*



Spiral-Bound Hose (RA-3)

National rubber hose, spirally wound with cord or wire can utilize, it is said, more than 90% of tensile strength of cord or wire, as against 60% to 70% by braided construction, and can withstand pressures many times those possible in braided hose of same weight. "Scissoring action" on strands is also eliminated. The ½- to 4-in. hose has been tested in services indicating its suitability for diesel fueling. *National Hose Co.*



Draft Gear (RA-4)

The Waughmat main springs of the Type 650 draft gear, which has been conditionally approved by the AAR, are made of urethane compound. The full-action gear performs smoothly with uniform action throughout its 3¼-in. travel. During AAR endurance tests the gear is said to have gained more than 10% in capacity. Capacity at closure is 52,100 ft lb. At 522,000 lb average reaction, the gear tested to an average capacity of 43,700 ft lb. The urethane compound is said to provide dependable resilience even at extreme cold. Laboratory drop tests indicate that satisfactory operation continues at minus 40 deg F and that the urethane compound retains resilience to minus 60 deg F. Spring assembly consists of pre-curved leaf springs in addition to Waughmats. No additional follower is needed. The gear embodies a follower which fits over the casehardened and lead-lubricated wedges and is part of the unit assembly. Flat follower is for standard "E" coupler applications; spherical seat follower for "F" applications. The 450-lb unit is designed for a 24⅝-in. draft pocket. *Waugh Equipment Co.*

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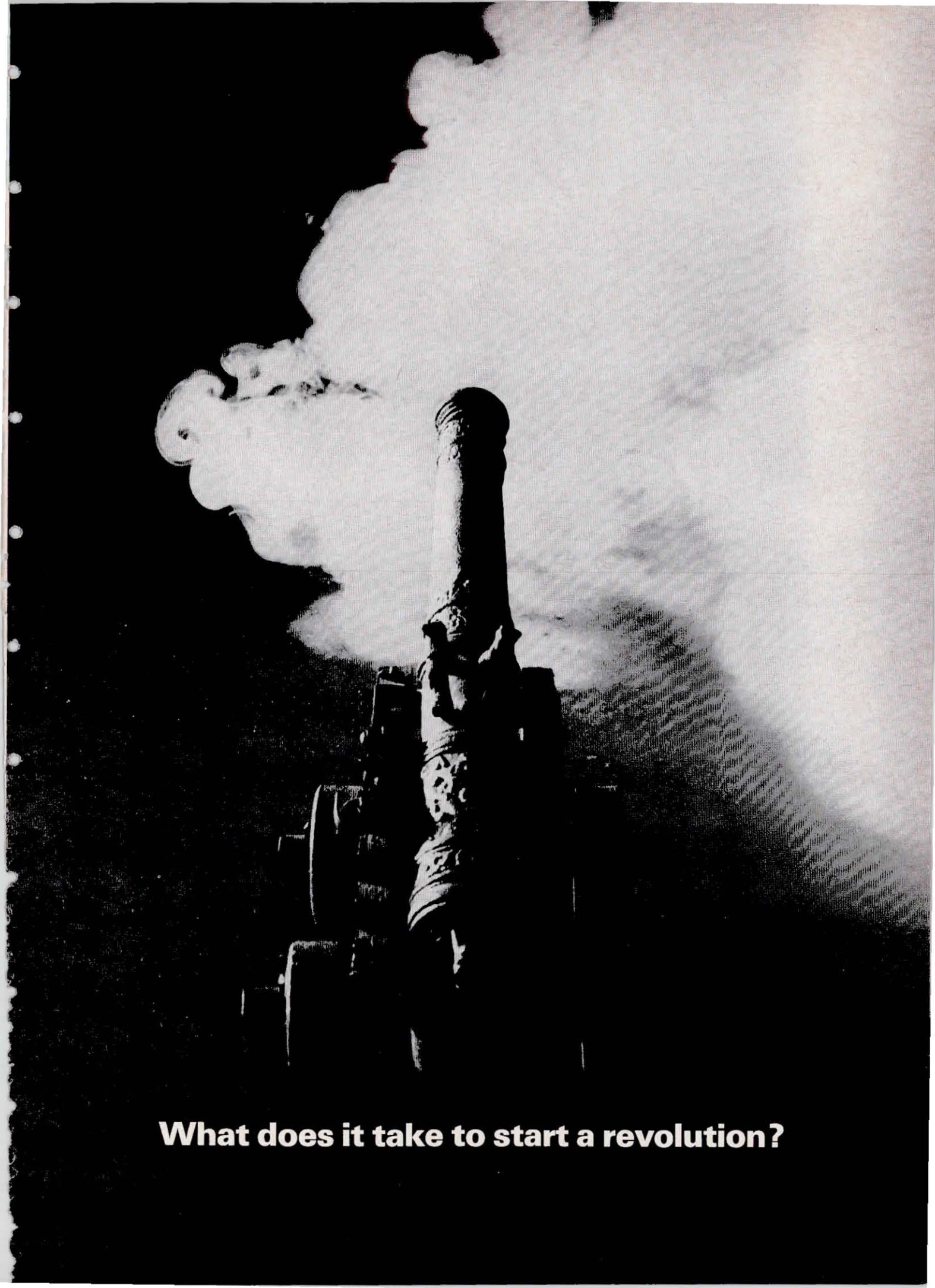
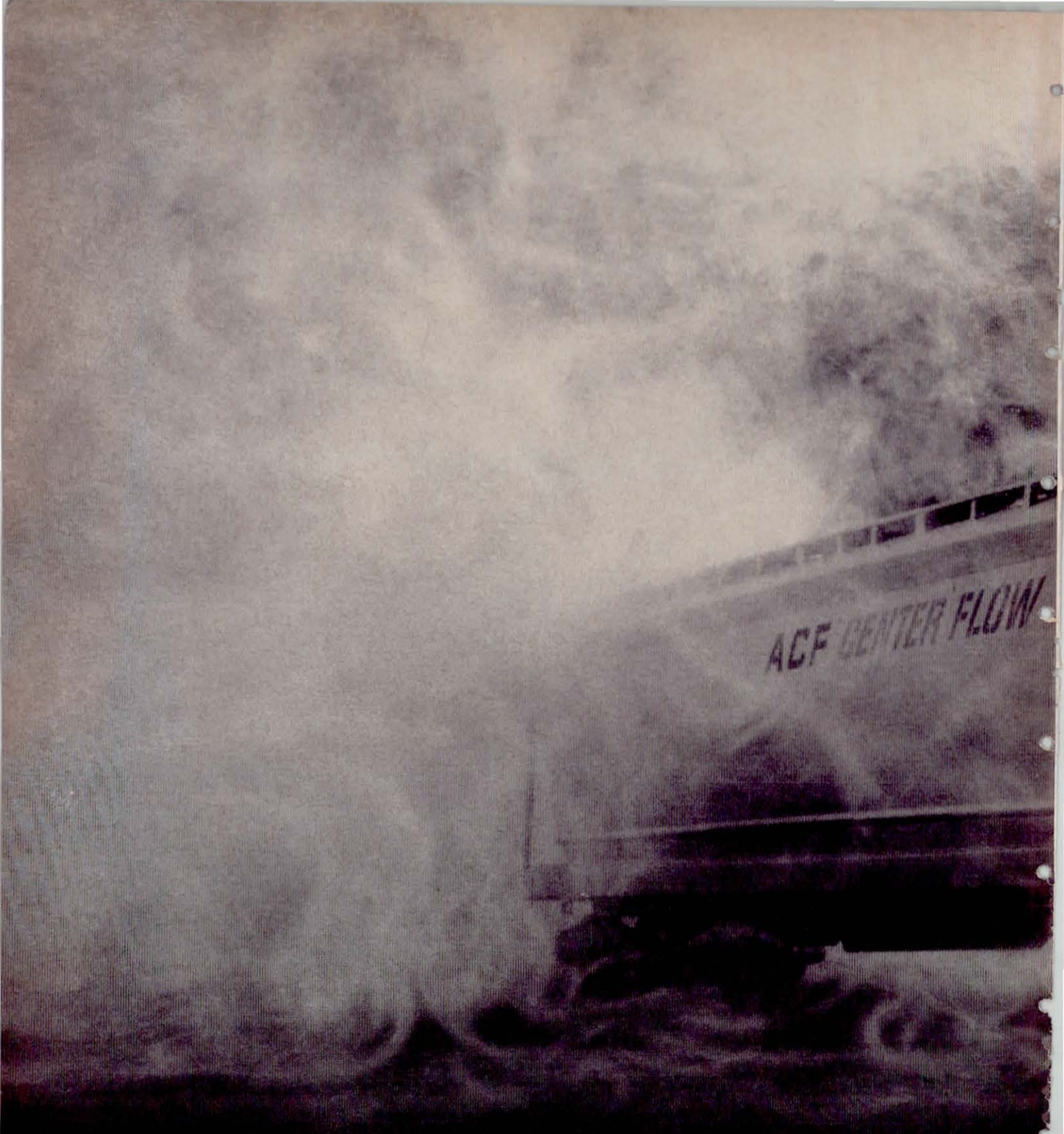

What does it take to start a revolution?



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acf ACF INDUSTRIES

What's ahead for engineers?

(Continued from page 23)

Wis.; and the RS concrete tie as used by the French National Railways. The latter tie is now available here from Railway Automated Machinery Co. (RAMCO).

● **Lessons learned.** In the five years the prestressed tie has been under observation a great deal has been learned about it, Magee said. As a result of cracks that developed in the first ties installed, changes have been made in the location of the prestressing strands, and in the provision for anchoring the fastening bolts.

"We feel that we have solved most of the structural difficulties with the ties during this 5-year service period but we still have the question of the service life of the ties," Magee said. "All accelerated tests on dense and high-strength concrete, such as that used in making the ties, indicate a long service life but we will not be able to secure reliable data on the actual service life of prestressed concrete ties for many years."

On buying concrete ties

In view of this circumstance Magee offered a number of recommendations for the railroads to follow in purchasing concrete ties for main-line track. These recommendations covered the size of the tie, the bending moments at the center of the tie and at the rail seat, details of the rail seat, the type of anchorage for the bolts, the rail anchorage, the rail-fastening clips and the pads used between the rails and the tie seats.

● **Bridge inspection practices.** Some important revisions in timber bridge inspection practices comprise a new dimension in railroading advocated by one speaker. Based on his experience in inspecting timber bridges on over 40 railroads in the United States, Canada and Mexico during the past five years, John W. Storer, vice president of Osmose Wood Preserving Company of America, Inc., characterized the present bridge inspection procedures on many railroads as "grossly inadequate."

Storer then proceeded to back up his statement by citing examples in which careful inspection of bridges resulted in revision or cancellation of plans for replacement, with considerable ensuing savings to the railroads involved.

These are not isolated cases to be classified as "oddball situations," he said. "The fact is that many railroads are not renewing their worst bridges—and in many cases I have observed bridges in good structural condition being replaced on that same property. With today's highly competitive situation in the transport industry, no railroad can afford to cut out piles or replace bridges prematurely. By the same token, today's heavier loadings make it imperative to replace any member below your minimum strength requirements."

Discussing the reasons for the errors in judgment made during timber inspections, Storer named hammer sounding as one of them. "There have been more good piles cut out of bridges based on hammer sounding than for all other reasons combined," he said. His experience is that sounding, without boring those members sounding suspicious, is less than 50% accurate.

Other errors result from various misconceptions that Storer called the "fantasies of timber bridge inspection." He listed 12 such fantasies.

Storer made three recommendations for improving inspection procedures. One was to sound all timber possible, with special attention given to locations likely to trap moisture. The second was to make power borings in all timbers where sounding indicates possible internal decay. The third was to measure the shell thickness and record the information on an appropriate form.

● **Not enough for RR research.** Is the railroad industry committing an adequate amount of money for research? Some figures intended to provide an answer to this question cropped up in an address by Dr. William W. Seifert, associate dean of engineering, Massachusetts Institute of Technology. Dr. Seifert cited two figures which he feels "bear very significantly on the problem."

(1) For the fiscal year 1966, approximately 90% of the federal budget for R&D is being spent in the areas of defense, space and atomic energy. This represents an outlay of about $15 billion. The commitment to R&D by the defense department represents over 10% of its total budget.

(2) In recent years the total commitment of the railroad industry to research and development has represented less than one-fifth of one percent of its gross revenues.

Dr. Seifert then showed how funds alloted for research to educational institutions by governmental agencies have brought about a situation in which "many of the interesting forefronts of basic knowledge that attract faculty and graduate students have been receiving their support from the areas of defense, space and atomic energy."

By way of contrast he pointed out that "neither the railroads nor their equipment suppliers have given significant support to research in the universities and only recently has the federal government allocated any funds for research in rail transportation. As a result, essentially no research in this area has been conducted in the universities."

● **Changes ahead?** Recent developments relative to the Northeast Corridor Transportation Project have caused Dr. Seifert to conclude that "some steps have been taken which could lead to some very significant changes in this whole situation." He then got into MIT's involvement in that project. Out of the resulting studies has come the conclusion that "only a system which employed wholly new kinds of vehicles, guideways and control systems and which would permit vehicle speeds exceeding 300 mph would effectively meet the transportation needs of the future."

Attracting students

Research studies growing out of the High-Speed Ground Transportation Research and Development Act of 1965, which authorizes expenditure of $90 million over a three-year period, have led Dr. Seifert to this conclusion: "A program of this nature will attract students who will then be prepared to move into a variety of positions in the transportation field."

Additional concepts of the new dimensions in railroading were brought out in other addresses:

—James Timpson, vice president, Soros Associates, described a new rail-to-ship coal terminal on the B&LE, which represented a departure from conventional coal terminal development in that interdependence of ship and train schedules is eliminated.

—R. H. Beeder, system chief engineer of the Santa Fe, described a proposal in which nuclear energy would be used to excavate 68 million cubic yards of material in blasting a cut through a mountain range in California. The cut would be required in constructing a line change and would obviate the need for a two-mile tunnel.

● **New officers.** In the election of officers, J. M. Trissal, vice president, Illinois Central, was advanced from senior vice president to president. T. B. Hutcheson, chief engineer, Seaboard Air Line, was automatically moved up from junior vice president to senior vice president. H. E. Wilson, assistant chief engineer system, Santa Fe, was elected junior vice president. New directors are: G. V. Guerin, chief engineer, Great Northern; C. Neufeld, assistant chief engineer, Canadian Pacific; H. W. Kellogg, regional chief engineer, Chesapeake & Ohio, and F. H. McGuigan, assistant engineer of structures, Missouri Pacific. ■

Henry J. Brehm
EJ&E

T. W. Mackenroth
GN

Chester C. Dilley
Milwaukee

John B. Hitchcock
NYC

PEOPLE IN THE NEWS

ASSOCIATION OF WESTERN RAILWAYS.—Frank J. Stanton named director of public relations, to succeed **Paul D. Shoemaker,** who retired Feb. 28. **Alfred E. Greco** promoted to assistant director of public relations.

BAY AREA RAPID TRANSIT.—Has organized its engineering staff into two separate internal divisions. Heading the divisions are **Erland A. Tillman,** assistant director in charge of design and construction, and **E. John Ray,** assistant director in charge of transit operations.

BURLINGTON.—D. R. Lamb named assistant comptroller-costs.

R. W. Richards, district storekeeper, Aurora, Ill., advanced to traveling storekeeper, Chicago. **R. E. Clayton** succeeds Mr. Richards.

CANADIAN PACIFIC.—R. C. Gilmore, manager marketing, appointed manager—planning and training, with headquarters as before at Montreal, Que.

C. C. Watson appointed manager—freight sales, Detroit, Mich., assuming the duties formerly carried out by **G. C. Mensing,** general freight agent, who retired Jan. 31, after over 45 years of service.

DULUTH, MISSABE & IRON RANGE.—J. P. Keeney, Jr., manager of pricing, Duluth, Minn., appointed manager of sales, effective March 1, succeeding **R. J. Hoch, Jr.,** named manager of sales, **Bessemer & Lake Erie,** Pittsburgh (RA, Feb. 7, p. 34). **Thomas J. Siegel,** assistant to the traffic manager, **B&LE,** succeeds Mr. Keeney as manager of pricing, DM&IR.

W. J. Pritz elected comptroller, Duluth, succeeding **J. A. Staples. J. M. Reid** named assistant comptroller there.

ELGIN, JOLIET & EASTERN—James D. Wright appointed assistant comptroller, Joliet, Ill., to succeed **William J. Pritz,** named comptroller, **Duluth, Missabe & Iron Range.** Mr. Wright was formerly manager of local accounting, **Bessemer & Lake Erie.**

Henry J. Brehm, formerly general superintendent, **Newburgh & South Shore,** named superintendent, South Chicago division, **EJ&E,** to succeed the late **Frank J. Herrold.**

GREAT NORTHERN.—T. W. Mackenroth, master mechanic, Seattle, appointed superintendent, Klamath division, Klamath Falls, Ore. (RA, Feb. 14, p. 39).

LONG ISLAND.—Bernard G. Bower, terminal superintendent, Penn Station, New York, promoted to superintendent of transportation, following retirement of **Russell D. Spore,** general superintendent transportation, after more than 46 years in railroading. **Joseph C. Valder,** assistant passenger trainmaster, succeeds Mr. Bower as terminal superintendent. **Roger W. Milroy** transferred from the Engineering Department and promoted to assistant terminal superintendent, Penn Station.

Edwin K. St. Clair, assistant chief engineer—maintenance, Jamaica, N.Y., promoted to assistant chief engineer—staff. **John D. Woodward,** who left the LI last year to join the **Matisa Equipment Corp.,** Chicago, has returned to replace Mr. St. Clair as assistant chief engineer—maintenance.

Donald W. Aiken, acting assistant, advanced to assistant chief engineer—signals and electric traction, Jamaica. **John J. Hoolahan,** assistant valuation engineer, promoted to valuation engineer, succeeding **John W. Rowland,** retired after nearly half a century with the LI.

Robert W. Wallendorf, general foreman—cars, promoted to assistant master mechanic. **Richard T. Weiss,** mechanical engineer, promoted to general foreman—locomotives, succeeding **H. Vincent Tozer,** who replaces Mr. Wallendorf as general foreman—cars. **John Van Doorne,** assistant mechanical engineer, promoted to mechanical engineer. **John W. Jackson,** assistant master mechanic, **Pennsylvania,** named to the new position of electrical engineer, LI.

MILWAUKEE.—Virgil E. Glosup elected vice president-chief engineer.

Chester C. Dilley, passenger traffic manager,

Railway Age Index

The index to Volume 159, the latest volume of Railway Age, July-December, 1965, is ready for distribution, and copies may be had by those subscribers desiring them. Requests should be addressed to the Circulation Department, Railway Age, Emmett Street, Bristol, Conn. Subscribers who have in previous years made application for the index need not apply again. They will continue to receive it as long as they continue to subscribe.

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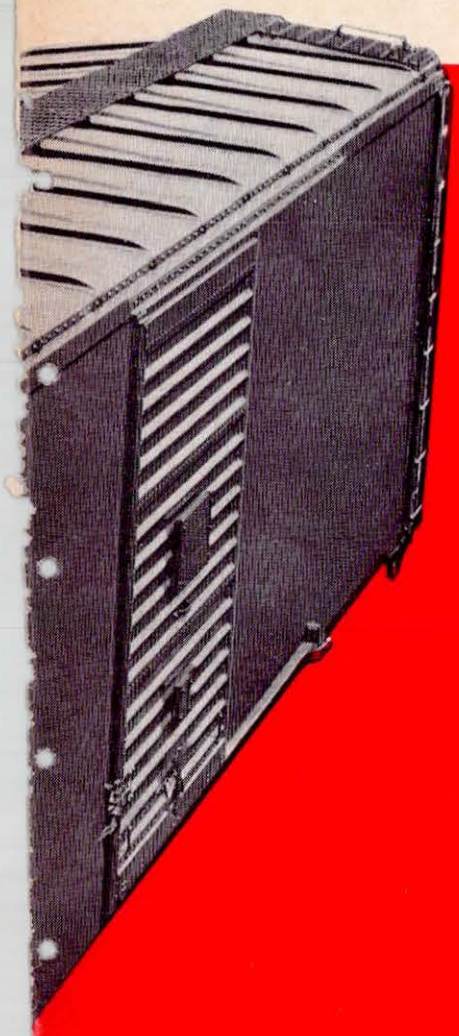

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The corrugations of Standard Dreadnaught Ends provide the greatest resistance to shock and impact—add strength where it's needed most.

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Freight and Passenger Car Charts

These charts are very helpful to AAR billing clerks, mechanical engineers, purchasing and stores personnel, car inspectors, write-up men, car foremen, and anyone else who needs a knowledge of car parts and their relation to each other.

The charts include a cutaway diagram of the car and a listing of important parts with arrows showing where the part is located. These charts are a part of standard training programs used on a number of major railroads.

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RA-3/21

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named director of public relations and advertising, to succeed **George H. Kronberg,** elected vice president-sales and service (RA, March 14, p. 37). Mr. Dilley, who will continue his jurisdiction over the passenger traffic department, retains his headquarters at Chicago.

NEWBURGH & SOUTH SHORE.—W. D. McNeilly, general superintendent, **Youngstown & Northern,** Youngstown, Ohio, appointed general superintendent, Newburgh & South Shore, Cleveland, succeeding **H. J. Brehm,** appointed superintendent, South Chicago division, **Elgin, Joliet & Eastern.**

NEW YORK CENTRAL.—Julian W. Greve, district freight sales manager, Buffalo, N.Y., appointed division freight sales manager, Rochester, N.Y., succeeding **Thomas P. Halligan,** named division freight sales manager, New York. **Richard C. Cohea,** district freight sales manager, Omaha, Neb., appointed division freight sales manager, Syracuse, N.Y., succeeding **Thomas J. Garden,** promoted to assistant freight sales manager, New York. **George Turner,** district freight salesman, Rochester, appointed district freight sales manager, Buffalo, succeeding Mr. Greve.

S. J. Orlando named director of terminal procedures, New York, succeeding **J. B. Hitchcock,** promoted.

The NYC Foreign Freight Sales Department moved from the Cunard Bldg., 25 Broadway, New York, to NYC headquarters, 466 Lexington Avenue, on Feb. 28.

William R. Walker appointed supervisor car maintenance—freight, New York, succeeding **P. R. Oliver,** named manager of car maintenance with jurisdiction over freight and passenger car facilities, other than shops. **V. F. Kania** appointed manager of heavy repairs and specially equipped cars, New York. Abolished position of supervisor car maintenance—special equipment.

Larry R. Jacobson appointed engineer of buildings, Western District, Cleveland, succeeding **John A. Wettstone,** promoted.

John B. Hitchcock, director of terminal procedures, New York, appointed terminal superintendent, Cincinnati, Ohio, succeeding **Theodore J. Brown,** promoted to transportation superintendent, Northern District, Detroit, Mich.

RICHMOND, FREDERICKSBURG & POTOMAC.—William W. Young appointed staff assistant—personnel, Richmond. He was formerly employed by the **Chesapeake & Ohio.**

ROCK ISLAND. — William Butterworth, vice president of **DePorter-Butterworth Tours, Inc.,** Moline, Ill., has been retained by RI as a consultant on passenger train service matters.

Gerald T. Slattery, freight sales representative, Chicago, named foreign freight representative.

Robert W. Morrison, district manager-freight sales, St. Joseph, Mo., named to the newly established position of industrial agent, Des Moines. **Edward F. Wozniak** named industrial analyst, Chicago.

TRANSPORTATION ASSOCIATION OF AMERICA.—Roland A. Ouellette, director, Transportation Action Program, Chamber of Commerce of the United States, appointed manager, information and education, TAA, Washington, D.C.

YOUNGSTOWN & NORTHERN.—R. D. Adamson, superintendent transportation, **Elgin, Joliet & Eastern,** Gary, Ind., appointed general superintendent, Youngstown & Northern, Youngstown, Ohio, succeeding **W. D. McNeilly,** appointed general superintendent, **Newburgh & South Shore,** Cleveland.

Supply Trade

The **W. T. Cox Co.** has announced the following sales and service representatives for its Rail-Road Division: **ESCO** (Equipment Service Co.), Chicago; **Railway Techniques,** Kansas City, Mo.; **HABCO** (Horne-Boatright Chemical Co.), Minneapolis, Minn. and Birmingham, Ala., and **Pacific Railway Sales,** Berkeley, Calif. The general offices of W. T. Cox Co. are being moved from Santa Ana, Calif., to its Camdenton, Mo. location. The firm's HYKIL Division operation will remain at Santa Ana.

Richard D. Johnson has been named a public relations representative on the Chicago staff of **Pullman-Standard.** He was formerly an account manager, **Waldie & Briggs,** Chicago.

General American Transportation Corp. has announced the following appointments in its data processing department: **Fred G. Hessler,** operations manager; **Edward L. Reardon,** administrative manager; **James R. Harper,** programming manager.

R. E. Bockrath has been appointed projects manager, railroad industry, a new position within the **Dow Chemical Co.** He will concentrate on railroads in Chicago and the Midwest and will continue to serve as the technical expert for transportation applications of aluminum and magnesium.

Val Hernandez has been named railroad sales engineer, **KW Battery Co.,** Skokie, Ill. Mr. Hernandez has a background of 18 years with the **Milwaukee** and 12 years experience in the battery industry.

OBITUARY

Bernard E. Breitzke, 66, general claim agent, **Illinois Central,** died March 6 in Illinois Central Hospital, Chicago.

Curtis A. McRee, 68, who retired in 1964 as assistant vice president—personnel, **Seaboard,** died March 4 of a heart attack in Jackson, Miss.

Ralph W. Porter, 62, vice president—marketing, and **Henry Kolbo,** 60, manager—national accounts, **Thermo King Corp.,** at Minneapolis, Minn., and Glendora, Calif., respectively, died March 5 in an airplane crash near Mt. Fuji, Tokyo, Japan.

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MARKET OUTLOOK

Carloadings

Loadings of revenue freight in the week ended March 12 totaled 557,600 cars, the Association of American Railroads announced on March 17. This was an increase of 12,961 cars, or 2.4%, compared with the previous week; an increase of 8,864 cars, or 1.6%, compared with the corresponding week last year; and an increase of 48,543 cars, or 9.5%, compared with the equivalent 1964 week. Ton-miles generated by carloadings in the week ended March 12 are estimated at 14.1 billion, an increase of 8.3% above the corresponding week of 1965, and 17.8% above the 1964 week.

REVENUE FREIGHT CARLOADINGS

For the week ended Saturday, Mar. 12

District	1966	1965	1964
Eastern, including Allegheny and Pocahontas ..	226,830	227,145	200,656
Southern	119,131	116,394	107,584
Total Eastern and Southern Districts	345,961	343,539	308,240
Northwestern .	58,528	60,240	57,434
Central Western	111,960	107,158	106,214
Southwestern .	41,151	37,799	37,169
Total Western Districts	211,639	205,197	200,817
Total All Roads	557,600	548,736	509,056
Commodities:			
Grain and Grain products	55,263	49,888	46,173
Livestock	1,736	2,207	2,604
Coal	108,783	99,977	91,885
Coke	8,590	8,741	7,472
Forest Products	40,687	38,961	39,517
Ore	18,302	18,674	15,192
Merchandise l.c.l.	6,550	10,591	13,429
Miscellaneous .	317,689	319,697	292,785
March 12	557,600	548,736	509,057
March 5	544,639	531,658	506,280
Feb. 26	535,979	504,689	518,408
Feb. 19	537,702	529,594	502,601
Feb. 12	534,350	512,582	516,132
Cumulative total, 10 weeks ...	5,300,695	5,242,442	5,161,331
Estimated revenue ton-miles billions) 10 weeks ...	133.7	124.4	122.7

PIGGYBACK CARLOADINGS—U.S. piggyback loadings for the week ended March 5 totaled 22,479 cars carrying 37,057 trailers, compared with 20,342 cars, carrying 32,749 trailers, in the corresponding 1965 week. Loadings for 1966 up to March 5 totaled 182,961 cars, carrying 300,826 trailers, compared with 164,776 cars, carrying 267,383 trailers, in the corresponding period of 1965.

IN CANADA—Carloadings for the seven-day period ended Feb. 28 totaled 78,047 cars, compared with 74,350 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Feb. 28, 1966	78,047	27,507
Feb. 28, 1965	68,547	23,781
Cumulative Totals		
Feb. 28, 1966	597,579	209,011
Feb. 28, 1965	555,422	193,642

FREIGHT-TRAIN CARS

► *Canadian National.*—Ordered 200 50½-ft, 70-ton box cars from National Steel Car. Most of the cars will be assigned to CN's "Yellow Door" newsprint fleet. They will be equipped with hydraulic cushioning devices, 9-ft doors and hardwood floors. Delivery will begin in November.

► *Erie Lackawanna.*—Plans to acquire 585 freight cars and 150 piggyback trailers at a total cost of $9.6 million during 1966. Orders were recently placed for 250 70-ton hopper cars, and 50 100-ton, 53½-ft flat cars, equipped with skids and covers for handling coil steel, to be built by Greenville Steel Car; and 55 100-ton center-flow covered hopper cars to be built by ACF. Delivery of the hopper cars is expected to begin in late June, and the flat cars in November.

► *Missouri Pacific.*—Ordered 400 100-ton covered hopper cars from ACF at a cost of $5,480,000; and 100 86½-ft, 10,000-cu-ft-capacity box cars from Thrall Car at a cost of $3,690,000. Deliveries will begin in July and be completed by Aug. 31. All cars will be equipped with roller-bearing trucks, and the box cars will be equipped with cushioning devices. The new orders bring to 2,558 the number of new cars being purchased by MP and subsidiaries during 1966.

► *United Carbon Co.*—Leased 50 4,600-cu-ft-capacity covered hopper cars from Shippers' Car Line Division, ACF Industries for transportation of carbon black.

February Bad Order Ratio 0.7% Lower than Last Year.—Class I roads on Feb. 1, owned 1,479,203 freight cars, 15,575 less than on Feb. 1, 1965, according to AAR report summarized below. Bad Order Ratio was 0.7% lower than on Feb. 1, 1965.

	Feb. 1, 1966	Feb. 1, 1965	Change
Car ownership	1,479,203	1,494,778	—15,575
Waiting repairs	78,790	90,306	—11,516
Repair ratio	5.3%	6.0%	— 0.7%

LOCOMOTIVES

► *Santa Fe.*—Ordered 60 diesel-electric locomotives at a cost of $16 million. EMD will supply 30 3,600-hp units and 20 3,000-hp units. General Electric will build 10 2,800-hp units. (An earlier report of this order, published on this page Feb. 28, was incomplete.)

NEW FACILITIES

► *Norfolk & Western.*—Will spend more than three quarters of a million dollars to construct additional piggyback or multi-level automobile traffic facilities in Buffalo, St. Louis, Detroit and Toledo. At Buffalo's Bison Yard, about 12 acres have been purchased and four acres leased to expand the present 6 1/3-acre auto parking area. The project includes drainage, blacktopping, lighting and the installation of 4,500 feet of fencing. At Hazlewood, Mo., near St. Louis, a car storage and repair installation is planned near the automobile loading docks. There will be four tracks, a service building, waterline, air compressor and driveways. Improvements at the piggyback area on Schaffer Highway in Detroit include an additional 24,000 square yard parking area, new surfacing on the present lots, two additional loading tracks, an extension of the office building and installation of low-level lighting and trackside walkways.

YOU OUGHT TO KNOW

Subway "holed through": Digging of Montreal's subway is nearing completion with recent "holing through" of the tunnel under the St. Lawrence River which will take Line 4, due for opening prior to next year's World Fair, to the island site of Expo 67 and to a south bank commuter station. Montreal officials are predicting opening of the first two lines in early autumn 1966. Right-of-way and station work on these routes is nearing completion and over 60 cars—about 15% of fleet on order—have already been delivered.

Advertising rail service: Prospective home buyers in the Chicago suburbs are being made aware of the passenger service that Chicago & North Western provides to their new address. For the second year now, C&NW is using the Chicago Tribune's classified section to publicize commuter service. The campaign in the Tribune's real estate and rental guides consists of a series of 400-line ads laid out as a commuting guide. Topped by a sketch of a suburban home, the copy carries a list of C&NW stations under the words: "If your new suburban home lies near one of these North Western stations, you'll enjoy the most modern, most efficient commuting in the country." Each ad also tells how schedules and fares may be obtained by telephone or mail. A second series of ads is scheduled to appear in 13 alternate weeks in the newspaper's Saturday Home Guide, and the Tribune has sent 250 builders and real estate brokers letters informing them of the railroad's campaign.

Time for transit studies: "Metropolitan areas of one million people should be seriously investigating the possibilities of rapid transit," David Q. Gaul, executive secretary of the Institute for Rapid Transit said last week. Speaking in Cincinnati (pop. 1.3 million), he cited that community as an example of what he meant: "The attractive hills of Cincinnati make for concentrations of people in different corridors. Consequently, traffic is concentrated in these corridors, making a much more difficult transportation problem than in a relatively flat city. Such a concentration of population and congestion in relatively narrow corridors makes for a situation favoring rapid transit." Gaul said many cities are making good progress on their planned transit systems, and that "in Cincinnati, it is time that rapid transit be investigated by qualified people."

An award from the BLF&E: Winner of the Brotherhood of Locomotive Firemen & Enginemen's 8th Annual Safety Award is James M. Duffy, a Pennsylvania fireman whose action helped save the lives of four boys who were walking in the path of a PRR freight train. Duffy spotted the youths on the track and called a warning to his engineer (coincidentally, a man who had won a previous BLF&E safety award). Engineer Donald P. Faulds sounded the locomotive horn and made an emergency brake application. Three of the boys jumped to safety; the fourth boy was injured but has since recovered. Duffy will receive his award at a BLF&E-sponsored dinner meeting March 23 in Washington.

PRR cuts passenger fares: In its continuing effort to fill empty seats on its trains with paying passengers, the Pennsylvania has come out with a travel bargain for Harrisburg and Lancaster, Pa., residents for weekend trips to New York City. Effective March 12, the road cut round-trip fares by one third for travel on most through trains Saturday and Sunday. PRR's general manager of passenger sales, John B. Dorrance, Jr., said the new fares are "another effort of the Pennsylvania to attract additional passengers. They are in addition to other travel bargains such as family fares, Ladies Day excursions, and the like."

Truck tonnage: Intercity truck tonnage in the week ended March 5 was 4.9% above that of the previous week, and 4.1% ahead of the volume in the corresponding week of 1965, according to American Trucking Associations.

Current statistics

Net Income	
12 mos., 1965	$815,000,000
12 mos., 1964	694,000,000
Carloadings, revenue freight	
10 wks., 1966	5,300,695
10 wks., 1965	5,242,442
Freight cars on order	
Feb. 1, 1966	45,754
Feb. 1, 1965	36,355
Freight cars delivered	
1 mo., 1966	7,725
1 mo., 1965	6,130
Serviceable cars	
Feb. 1, 1966	1,400,413
Feb. 1, 1965	1,396,720

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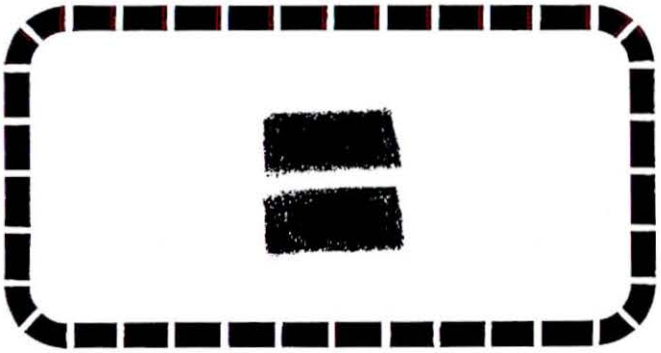

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THE ACTION PAGE

The give-and-take of technical progress

On March 31, 26 updated rules, standards and instructions pertaining to signal systems and facilities will become effective, by order of the Interstate Commerce Commission.

Experts generally agree that signal RS&Is (unrevised since 1950) were in need of modernization. No one really knows what compliance will cost, but three of the revised rules will cost U.S. railroads over $1 million. On these three rules, railroads have until Dec. 31, 1970, to bring signal facilities into compliance. Unfortunately, facilities that need modification are not spread evenly over all railroads. For example, one midwest railroad's signal engineer reports that he will have to spend "only a few thousand dollars" to comply. Other railroads will have expenditures running to $100,000 and higher.

The three rules for which compliance will be costly are:

— Rule 136.302, which says track circuits and route locking shall be effective when the first pair of wheels of a locomotive or car passes a point not more than 13 feet in advance of the signal governing its movement.

— Rule 136.408, which says route locking shall be provided where switches are power-operated, and that it shall be effective when the first pair of wheels of a locomotive or car passes a point not more than 13 feet in advance of the signal governing its movement.

— Rule 136.303, which specifies that the control circuit for each aspect of a signal with indication more favorable than "proceed at restricted speed" governing movements over switches, movable-point frogs and derails shall be selected through circuit controllers operated directly by switch points or by switch locking mechanisms, or through relays controlled by such circuit controllers. Circuits shall be arranged so that such signal can display an aspect more favorable than "proceed at restricted speed," only when each switch, movable-point frog, and derail in the route is in proper position.

Effect of the rules

Maintenance-of-way as well as signal departments will be involved in modifications forced by the first two rules cited. One road's signal engineer says that compliance will require moving signals or insulated joints, or both, at locations where a signal is more than 13 feet behind insulated joints. If the signal is moved, underground cables may have to be dug up and reburied, or new cables laid. It may prove more feasible to move insulated joints. In such cases, rail would have to be cut or replaced.

There's a bright side to the updated signal RS&I, too.

Rules have been modernized for greater safety and to better fit present operating practices. An old rule for dragging-equipment detectors is to be deleted. This rule required that where these devices were in use in block-signal territory they had to be arranged to operate in conjunction with automatic block-signals.

The reason for deletion is aptly stated by the Division 3 order: "Recent technological developments have improved radio communication to such an extent that train crews are informed more promptly of the presence of dragging equipment by radio than by indication of automatic signals."

The advantages of radio

Formerly, a long train could travel several miles before being stopped, risking derailment from dragging equipment as it did so. Now, train crews can be informed by radio about dragging equipment, and the train can be stopped immediately, thereby reducing the danger of derailment.

ICC regulations pertaining to so-called safety appliances on rolling stock are in for a similar updating. An examiner's report, already issued, recommends elimination of the running boards and the full-height side and end ladders from house-type equipment without roof hatches—box, stock and refrigerator cars. Here again there is recognition on the part of the ICC that advances in railway technology have outmoded old procedures. Equipment that was once absolutely vital to railroad operation today becomes not only unnecessary—but unsafe.

The ICC, cooperating with railroad engineers, union representatives and many other concerned parties, has again demonstrated the enlightened give-and-take that characterizes many little-publicized activities of the Commission. With all the disagreement and noise that is generated by other Commission activity, it is well to remember the complex, important work that goes on at the ICC to update systems and techniques in many vital areas of industry operation.

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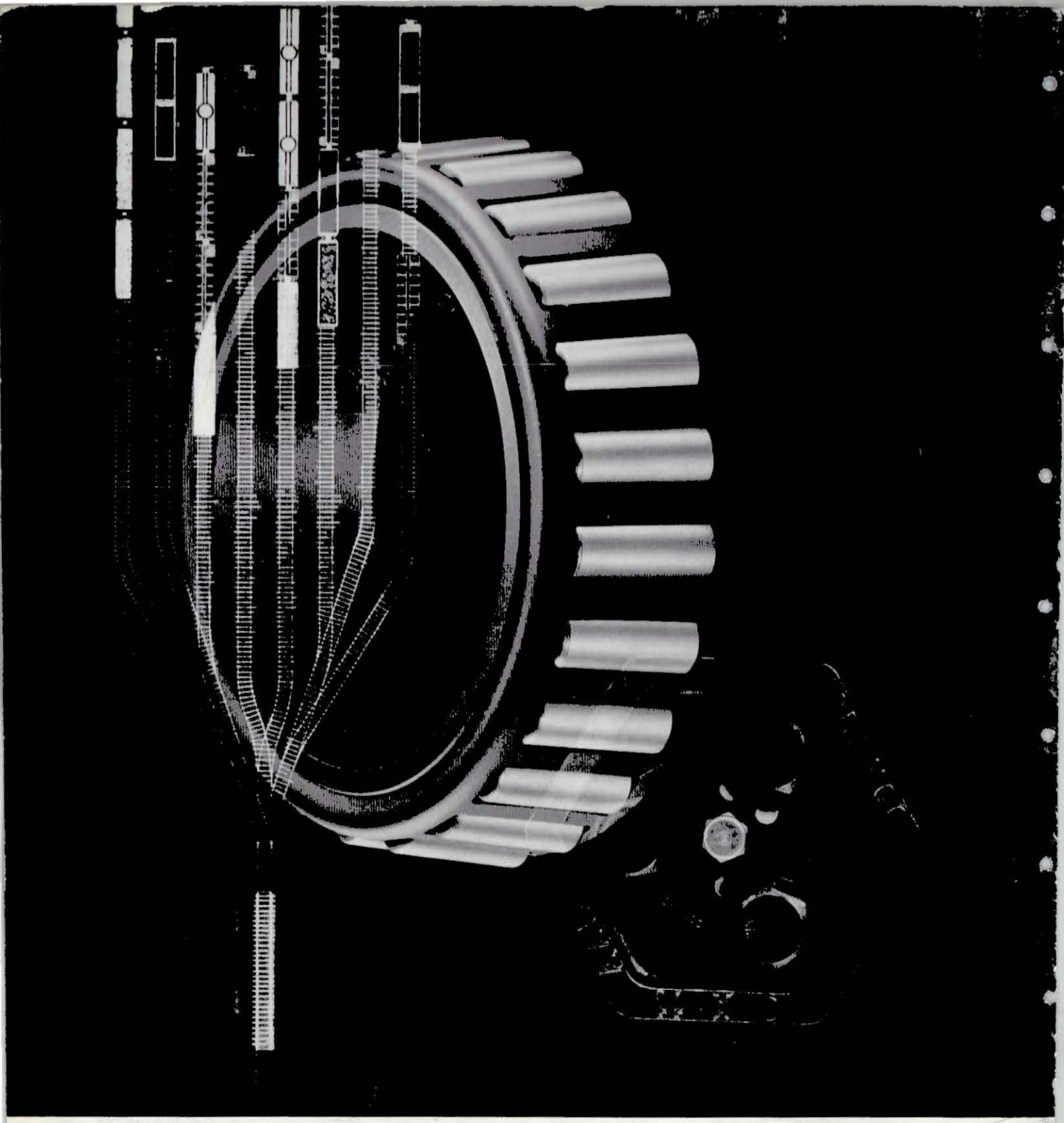

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